

Power efficiency for a cooler planet

2024 WeEn Semiconductors

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WeEn Semiconductors

PRODUCT SELECTION GUIDE



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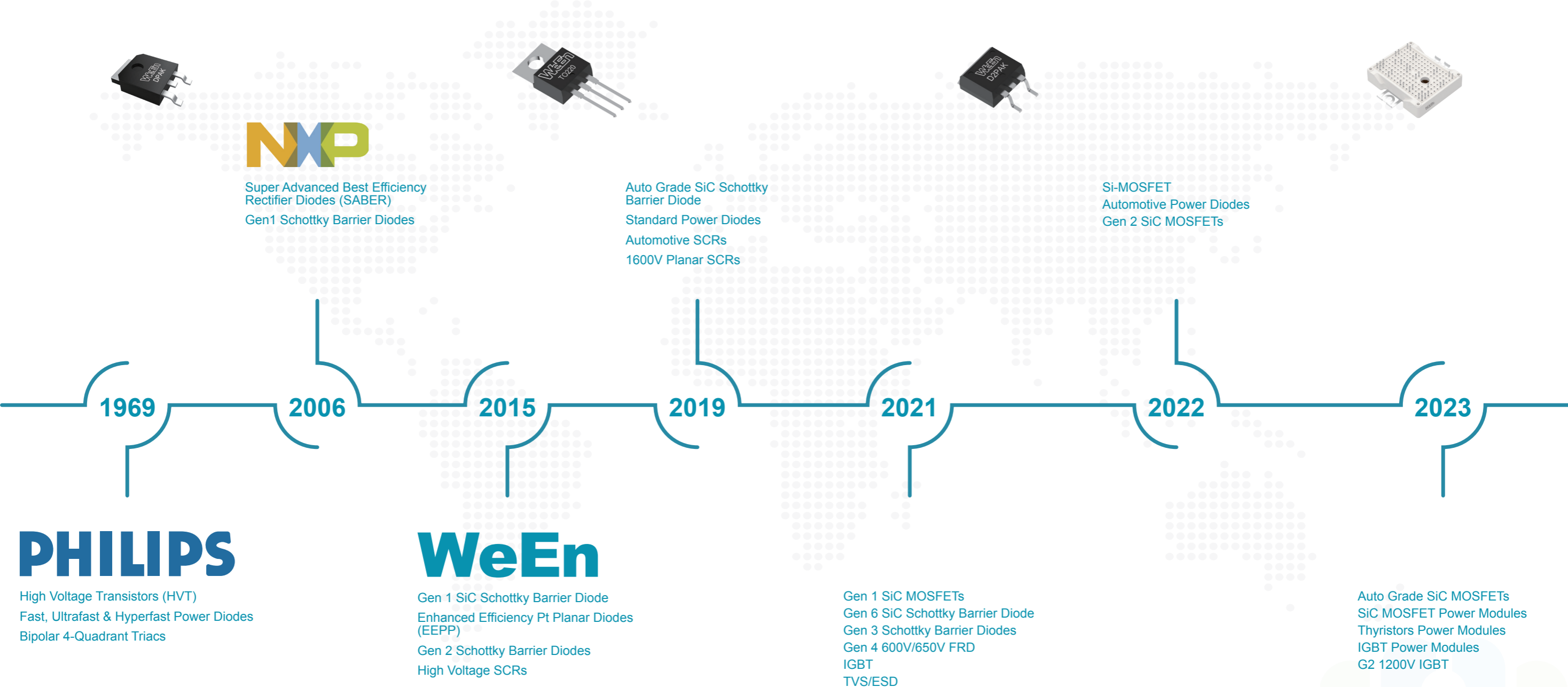
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WeEn Semiconductors; spun off from NXP; over 50 years' leading experience in the power segment



WeEn Semiconductors Company Introduction

WeEn Semiconductors Co., Ltd was registered as a company on Aug 5, 2015 since span off from NXP. WeEn's global footprint has an operational headquarters in Shanghai and wholly owned subsidiaries and centers in Jilin & Hongkong, north east China (Front-End Fabrication) Shanghai and Manchester, UK (Research & Development) , Nanchang (Reliability and Failure Analysis Laboratory), Dongguan(Warehouse and Distribution), and cities throughout the world (Sales Offices and Customer Service Access).

In July, 2023, WeEn first global module plant officially commences operations in the Shanghai Bay Area High-tech Industrial Development Zone.

With a heritage of over 50 years in semiconductor development and manufacturing, WeEn as a key player has focused on developing a wide and deep portfolio of industry-leading power products including Silicon Carbide Power Devices, Silicon Controlled Rectifiers and Triacs, standard and fast recovery Power Diodes , IGBTs, TVS and ESD protection Devices, Si MOSFETs and modules.

All these products are widely used in the markets for automotive, renewable energy, telecommunications, computers, consumer electronics, intelligent home appliances, lighting, and power management applications. WeEn seeks to help our customers achieve improved cost and production efficiency and contribute to the development of global intelligent manufacturing.

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WeEn Semiconductors

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Thyristors

AC THYRISTOR TRIACS

AC THYRISTORS

TEMPERATURE AND OVERLOAD PROTECTED TRIACS (TOPTriac)

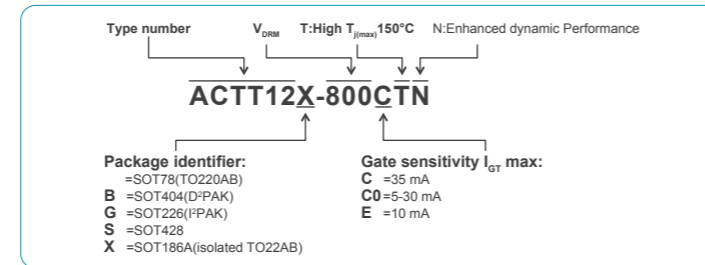
THREE-QUADRANT Hi-Com TRIACS

FOUR-QUADRANT TRIACS

SILICON CONTROLLED RECTIFIERS

SILICON CONTROLLED RECTIFIER POWER MODULES

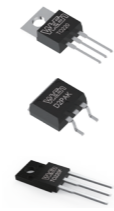
AC Thyristor Triacs part numbering



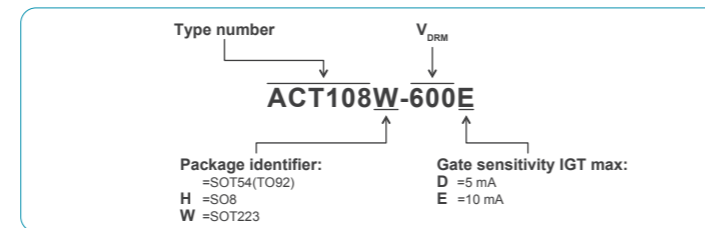
In the spotlight

AC Thyristor Triacs ACTT10 series, ACTT12 series

- Planar passivated with overvoltage clamping function
- High energy surge handling
- Very high dV_{j}/dt for maximum immunity to false triggering
- High $T_j(max)$ to 150°C



AC Thyristors part numbering



In the spotlight

AC Thyristors ACT108-800E, ACT108W-800E

- Planar passivated with overvoltage clamping function
- Working voltage increased to 800V
- Enhanced overvoltage clamping capability
- High false trigger immunity



In the spotlight

TOPTriac TOPT12, TOPT16

- Planar passivated for voltage ruggedness & reliability
- Over temperature & over load protection
- No need to over-specify triac and heatsink
- Avoid loss of control at high temperature
- Status monitoring with help of microcontroller



AC THYRISTOR TRIACS

3Q Hi-Com power switches, overvoltage protection

Types in **bold blue** represent new products
Types in **bold red italic** represent products in development
N: enhanced Noise immunity T: high $T_j(max)$ 150°C

I_{GT} key:
C 35mA
C0 5-30mA
E 10mA

$I_{T(RMS)}$ (A)	V_{DRM} (V)	$I_{GT(max)}$ (mA)	SOT223 SC-73	TO-252 SOT428 DPAK	TO-263 SOT404 D²PAK	TO262 SOT226A I²PAK	TO-220 SOT78	TO-220F SOT186A SC-67
2	800	E		ACTT2S				ACTT2X
4	800	ETN	ACTT2W	ACTT2S				ACTT2X
6	800	C/E		ACTT4S				ACTT4X
8	800	E			ACTT6B	ACTT6G	ACTT6	ACTT6X
8	800	CN			ACTT6B		ACTT6	ACTT6X
8	800	C0/C0T			ACTT8B		ACTT8	ACTT8X
8	800	CTN			ACTT8B		ACTT8	ACTT8X
10	800	C/CT					ACTT10	ACTT10X
10	800	CTN					ACTT10	ACTT10X
12	800	C/CT			ACTT10B		ACTT10	ACTT10X
12	800	CTN		ACTT12S	ACTT12B		ACTT12	ACTT12X
12	800	CTN			ACTT12B		ACTT12	ACTT12X
16	800	CTN			ACTT16B		ACTT16	ACTT16X

AC THYRISTORS

2Q Hi-Com power switches, exclusive negative gate triggering, common mounting base, overvoltage protection

Types in **bold blue** represent new products
Types in **bold red italic** represent products in development

I_{GT} key:
D 5mA
E 10mA

$I_{T(RMS)}$ (A)	V_{DRM} (V)	$I_{GT(max)}$ (mA)	MS-012 SOT96-1 SO8	SOT223 SC-73	TO-92 SOT54
0.2	600	D	ACT102H		
0.8	600	D/E		ACT108W	ACT108
0.8	800	E		ACT108W	ACT108

TEMPERATURE AND OVERLOAD PROTECTED TRIACS (TOPTriac)

2Q Hi-Com power switches, exclusive negative gate triggering, over-temperature protection

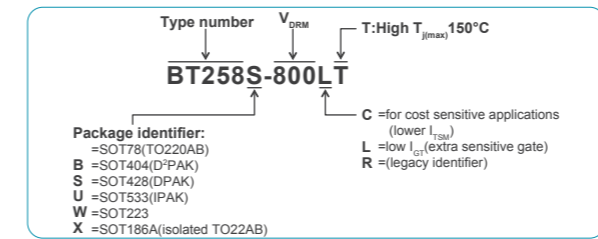
Types in **bold blue** represent new products
Types in **bold red italic** represent products in development

I_{GT} key:
C0 5-35mA

$I_{T(RMS)}$ (A)	V_{DRM} (V)	$I_{GT(max)}$ (mA)	TO-263 SOT404 D²PAK	TO-220 SOT78
12	800	C0		TOPT12
16	800	C0	TOPT16B	TOPT16

SILICON CONTROLLED RECTIFIERS

Silicon Controlled Rectifiers part numbering



In the spotlight

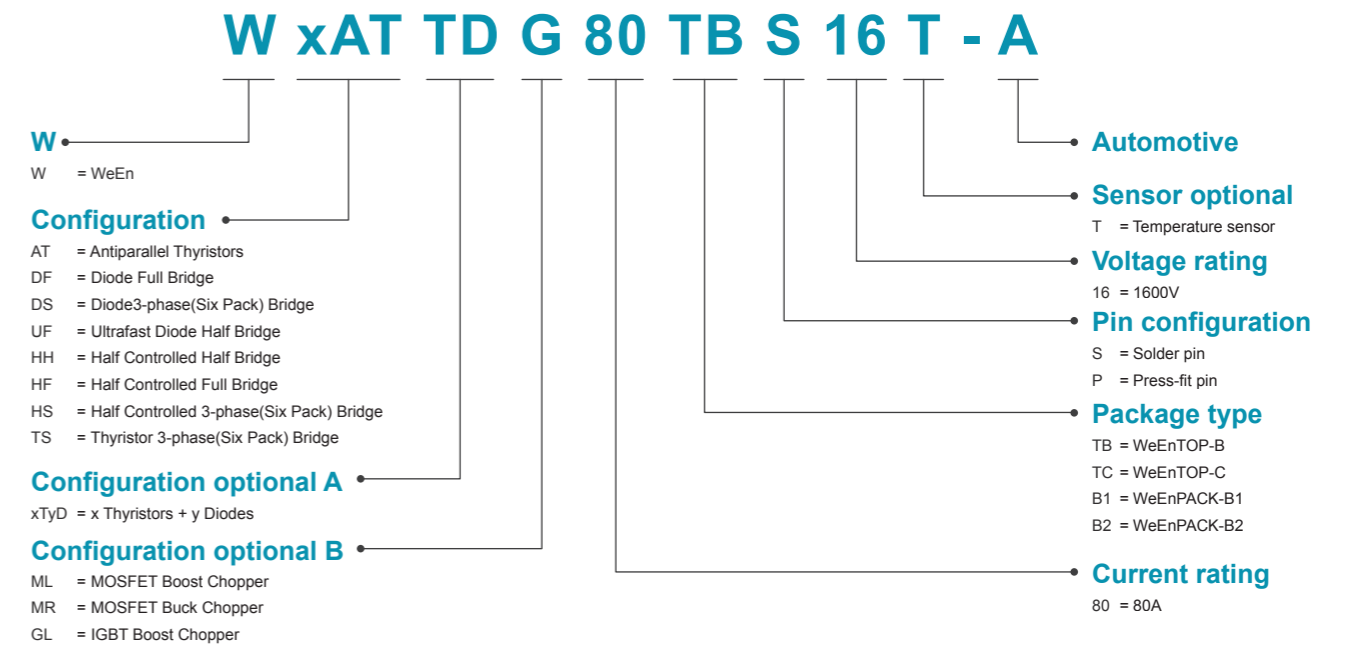
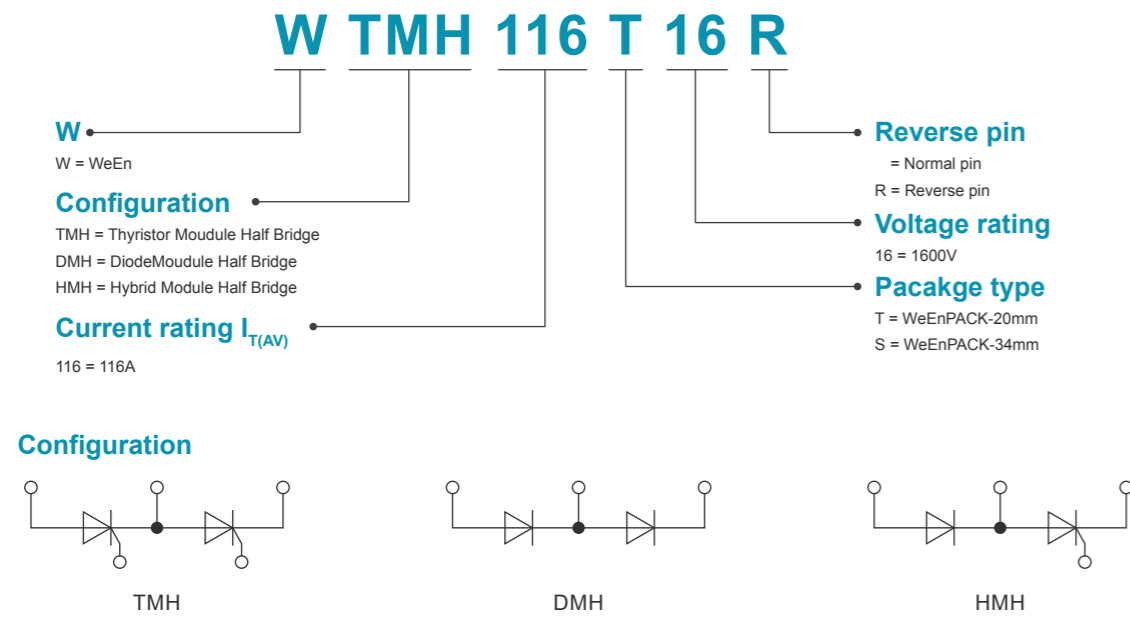
High Voltage, high surge capability
SCR BT155 series, BT158, TYN60
 Planar passivated for voltage ruggedness and reliability
 Very low on-state voltage (V_{T}) contributes to best efficiency in AC-DC conversion
 High junction operating temperature capability ($T_{jmax} 150^{\circ}C$)
 Less sensitive gate for high noise immunity

Types in **bold blue** represent new products
 Types in **bold red italic** represent products in development

A: Automotive qualified AEC-Q101 F: Fast switching L: Low I_{GT}
 N: enhanced Noise immunity T: high $T_{max} 150^{\circ}C$ (R): Reversed pin-out * High I_{TSM}

$I_{T(RMS)}$ (A)	$I_{T(AV)}$ (A)	V_{DRM} & V_{RRM} (V)	$I_{GT(max)}$ (mA)	SOT23	TO-243 SOT89	SOT223 SC-73	TO-252 SOT428 DPAK	TO-263 SOT404 D²PAK	TO-92 SOT54	TO-251 IPAK	SOT82	TO-220 SOT78	TO-220(ins) SOT78D	TO-220F SOT186A SC-67	TO-3P SOT1259 SC-65	TO-3P(ins) SOT1292	TO-247 SOT429	TO-247Plus	
0.8	0.5	200 400 600 200 / 400 / 600 200 / 400 / 600 400 500 / 600 600 600 600 600 800 800	0.2 0.012 0.5 μ A min - 7 μ A max 0.2 0.2 0.015 min - 0.05 max 0.02 min - 0.2 max 0.015 min - 0.05 max 0.03 min - 0.06 max 0.001 min - 0.1 max 0.015 min - 0.1 max 0.1 0.015 min - 0.05 max			MCR08BT1 EC103D1W			EC103D1 N0118GA BT149B/D/G BT169B/D/G BT169D-L BT168E/G BT169G-L BT169G-M										
1	0.6	600 600 600	0.02 min - 0.2 max 0.07 min - 0.45 max 0.2			BT168GW BT168GWF BT148W-R*													
1.1	0.7	850 850 1000 1000	0.015 min - 0.05 max 0.1 0.015 min - 0.05 max 0.1			NCR100W-10L NCR100W-10M NCR100W-12L NCR100W-12M MCR100W-10M													
1.25	0.8	1000 1000 1250 1250	0.01 min - 0.09 max 0.02 min - 0.04 max 0.01 min - 0.09 max 0.001 min - 0.1 max			WCR03-12WM NCR125W-125M			WCR03-10L(R) WCR03-12M										
4	2.5	400 / 500 / 600 500 600	0.2 0.2 0.2					BT150S-R			BT148-R	BT150-R							
8	5	500 / 600 / 800 600 600 800 800 650	0.2 0.2 5 0.05 0.2 0.2					BT300S-R BT258S-LT BT258S-R BT151S-S BT151S-L*		BT258U-R		BT258-R		BT258X-R					
12	7.5	500 / 650 600 650 650 650 500 / 650 / 800 500 / 650 / 800 500 / 1000	5 5 5 1.5 min - 5 max 15 15 15 15					BT151S-R*				BT151-L*	BT151-LTF* BT151-LTN*	BT151Y-LTF* BT151Y-LTN*	BT151X-LTF* BT151X-LTN*				
16	10.2	600 600 600 600 / 800	6 5 min - 10 max 15 25				BT151S-R*	BT151S-R*		BT151U-C		BT151-C BT151-R* BT151-RT*				BT151X-C BT151X-R*			
20	13	600 600 600 800 800	32 32 32 5 min - 10 max 6.2 32				BT151S-R*	TYN16S-CT		TYN16B-CT		TYN16-CTF TYN16-CT TYN16-RT*	TYN16Y-CTF TYN16Y-CT		TYN16X-CTF				
25	16	400 / 600 / 800 500 600 600	32 32 32 5 min - 10 max					BT152B-R		BT152B-R		BT152-R BT152-RT							
30	19	600 800	32 32 5 min - 10 max 6 min - 15 max					TYN20B-T		TYN20B-T		TYN20-T TYN20-TF	TYN20Y-T TYN20Y-TF		TYN20X-TF				
31	20	800 800	32 32																
40	25	1200 800	50 50 5 min - 35 max					TYN30B-TF TYN30B-T BT152B-T TYN40B-T				BT152-T TYN40-T TYN40-TN BT153-T							
47	30	800 800	32 32 5 min - 35 max					BT153B-T BT153B-T-A TYN50B-T TYN50B-TN				TYN50-T TYN50-TN	TYN50Y-T TYN50Y-TN						
79	50	1200 / 1600 1400 1200 1200 1400	80 50 50 50 50											BT155K-T		BT155Z-T		TYN50W-T TYN50W-T BT155W-T BT155W-T-A BT155W-T	
94	60	1200 1400	70 80																
126	80	1200 1600	70 80																
160	100	1200 1600	70 15 min - 100 max																BT158W-T TYN80W-T TYN100W-T
250	160	1600	15 min - 100 max																TYN100WP-T TYN160WP-T

SILICON CONTROLLED RECTIFIER POWER MODULES



Note: x / y: number of pairs / quantities, not shown if equals 1.

In the spotlight

Traditional Industrial Standard Package Series

- Planar passivated for voltage ruggedness and reliability
- High junction operating temperature capability (T_{max} 150°C) options
- Higher dV/dt capability to avoid false triggering

In the spotlight

Topside-cooled 12mm Height Series Modules

- Planar passivated for voltage ruggedness and reliability
- Baseplate free for better thermal dissipation
- Flexible topology configuration
- Compact design and space saving

Types in **bold blue** represent new products
 Types in **bold red italic** represent products in development

Package	Configuration	$I_{T(RMS)}$ (A)	$I_{T(AV)}$ (A)	I_{TSM} (A)	V_{DRM} & V_{RRM} (A)	$I_{GT(max)}$ (mA)	Product name
WeEnPACK-20mm TO-240AA		31	20	350	1200	30 min - 100 max	WTMH20T12R
		47	30	530	1200	30 min - 80 max	WTMH30T12(R)
		63	40	700	1400	30 min - 100 max	WTMH40T14
				750	1600	30 min - 80 max	WTMH40T16(R)
		94	60	1150	1600	30 min - 100 max	WTMH60T16R
		126	80	1700	1200	30 min - 100 max	WTMH80T12R
				1600	1600	30 min - 100 max	WTMH80T16R
		157	100	2000	1200	30 min - 100 max	WTMH100T12R
				1600	1600	30 min - 100 max	WTMH100T16R
		182	116	2300	1600	30 min - 100 max	WTMH116T16(R)
		220	140	2500	1600	30 min - 100 max	WTMH140T16R
		94	80	1700	1600	30 min - 100 max	WHMH80T16
				2300	1600	30 min - 100 max	WHMH116T16

Types in **bold blue** represent new products
 Types in **bold red italic** represent products in development

Package	Configuration	$I_{T(RMS)}$ (A)	I_{TSM} (A)	V_{DRM} & V_{RRM} (A)	$I_{GT(max)}$ (mA)	Product name
WeEnTOP-B		100	1500	1200	30 min - 100 max	WAT100TBS12
				1600	30 min - 100 max	WAT100TBS16
		134	2000	1200	30 min - 100 max	WAT120TBS12
				1600	30 min - 100 max	WAT120TBS16
		100	1500	1200	30 min - 100 max	WTD100TBS12
				1200	30 min - 100 max	WTD120TBS12



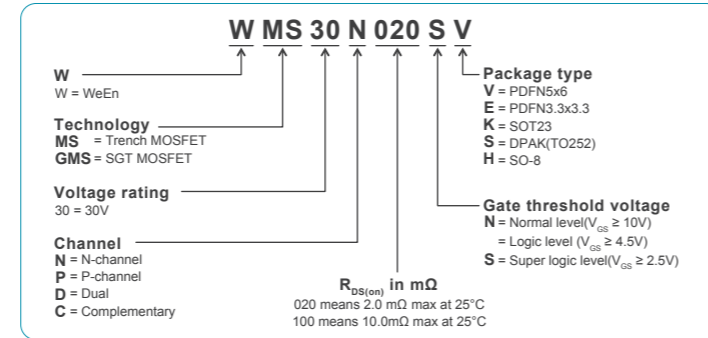
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02 MOSFETs

MOSFETs (LV)

MOSFETs (HV)

LV / MV MOSFETs part numbering



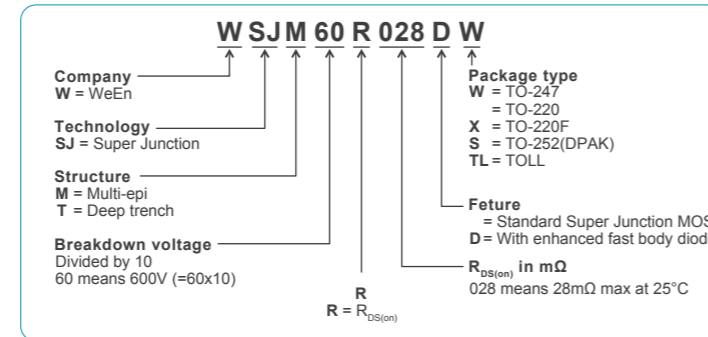
In the spotlight

LV MOSFETs

- Advanced high cell density trench technology
- Superior FOM $R_{DS(on)} * Q_g$
- Optimized gate charge to minimize driver losses
- 100% avalanche tested



HV MOSFETs Part numbering



In the spotlight

Super Junction MOSFETs

- Superior FOM $R_{DS(on)} * Q_g$
- Extremely low switching loss
- Integrated Ultrafast Body Diode available
- 100% avalanche tested



LV MOSFETs

Types in **bold blue** represent new products

Types in **bold red italic** represent products in development

Package	Config.	V_{DS} (V)	V_{GS} ($\pm V$)	Product name	$R_{DS(on)}$ (max)(mΩ)			I_D @ 25°C (A)
					@ $V_{GS} = 10V$	@ $V_{GS} = 4.5V$	@ $V_{GS} = 2.5V$	
PDFN5x6 (SuperSO8 equiv.)	N	30	20	WMS30N020V	2	3.3	-	150
				WMS30N034V	3.4	6	-	118
				WMS30N045V	4.5	7	-	81
				WMS30N050V	5	8	-	71
				WMS30N085V	8.5	15	-	41
PDFN3.3x3.3	N	30	20	WMS30N045E	4.5	7	-	67
				WMS30N050E	5	8	-	62
				WMS30N085E	8.5	15	-	40
				WMS30N140E	14	21	-	30
				WMS30N250E	25	35	-	19
				WMS30N300SE	-	30	45	17
				WMS20N270SE	-	27	44	18
TO-252 (DPAK)	N	30	20	WMS30N020S	2	3.3	-	159
				WMS30N034S	3.4	6	-	105
				WMS30N045S	4.5	7	-	94
				WMS30N050S	5	8	-	87
SOT-23	N	30	20	WMS30N250K	25	35	-	5.9
				WMS30N420K	42	65	-	4.5
				WMS30N300SK	-	30	45	5.4
				WMS30N500SK	-	50	65	4.2
				WMS30N1200SK	-	120	145	2.7
		WMS20N270SK	-	27	44	6		
		WMS20N300SK	-	30	45	5.4		
		WMS20N500SK	-	50	65	4.2		
		WMS20N700SK	-	70	100	3.5		
		WMS20N700SK	-	70	100	3.5		
SOT-323	N	30	10	WMS30N1200SKS	-	120	145	2.7
TO220	N	30	20	WMS30N030	3	4	-	152
				WMS30N040	4	5.2	-	119

HV MOSFETs

Types in **bold blue** represent new products

Types in **bold red italic** represent products in development

Package	V_{DS} (V)	V_{GS} (V)	$R_{DS(on)}$ (max)(mΩ) @ $V_{GS} = 10V$	I_D @ 25°C (A)	Feature	Technology	Product name		
								TO247	600
TO220	650	± 30	71 99 120 170	55 32 30 23	with FRD with FRD - -	super junction super junction super junction super junction	WSJM60R070D WSJM65R099D WSJM65R120 WSJM65R170		
			260 360 600	13 9.7 6.5	- - -	super junction super junction super junction	WSJM65R260 WSJM65R360 WSJM65R600		
			800 600	± 30 ± 30	200 71 99 120	23 55 32 30	- with FRD with FRD -	super junction super junction super junction super junction	WSJM80R200 WSJM60R070DX WSJM65R099DX WSJM65R120X
			170 260 360 600	± 30	23 13 9.7 6.5	- - - -	super junction super junction super junction super junction	WSJM65R170X WSJM65R260X WSJM65R360X WSJM65R600X	
			200 170	± 30	23 23	- -	super junction super junction	WSJM80R200X WSJM65R170Y	
			260 360 600	± 30	13 9.7 6.5	- - -	super junction super junction super junction	WSJM65R260Y WSJM65R360Y WSJM65R600Y	
TO263(D ² PAK)	600	± 30	71 99 120 170	55 32 30 23	with FRD with FRD - -	super junction super junction super junction super junction	WSJM60R070DB WSJM65R099DB WSJM65R120B WSJM65R170B		
			260 360 600	± 30	13 9.7 6.5	- - -	super junction super junction super junction	WSJM65R260B WSJM65R360B WSJM65R600B	
			200 360	± 30	23 9.7	- -	super junction super junction	WSJM80R200B WSJM65R360S	
			600 600	± 30	6.5 6.5	- -	super junction super junction	WSJM65R600S WSJM65R600S	
TO-252(DPAK)	650	± 30	71 75	55 45	with FRD with FRD	super junction super junction	WSJM60R070DTL WSJT65R075DTL		
			99 120 170	± 30	32 30 23	with FRD - -	super junction super junction super junction	WSJM65R099DTL WSJM65R120TL WSJM65R170TL	



WeEn
WeEn Semiconductors

03

Power Diodes

SCHOTTKY RECTIFIER

CASCO DIODES

HYBRID DIODES

BRIDGE RECTIFIER

3-PHASE BRIDGE RECTIFIER

AUTO POWER DIODES

ULTRAFAST POWER DIODES







HYPERFAST POWER DIODES

1200V HYPERFAST POWER DIODES

STANDARD RECTIFIER

SCHOTTKY RECTIFIER
Power schottky diodes for SMPS
output rectification


Types in **bold blue** represent new products
Types in **bold red italic** represent products in development

V_{RRM} (V)	$I_{F(AV)}$ (A)	$V_F(max)@25C$ (V)	$V_F(max)@125C$ (V)	$@I_F$ per diode (A)	SOT78 TO220AB	SOT186A TO220F-3L	D ² PAK TO263	DDPAK TO252	IITO220-2L	TO220F-2L
										
45	2 x 10	0.48	0.42	10	WN3S20H45C	WN3S20H45CX				
	2 x 15	0.53	0.48	15	WN3S3045C	WN3S3045CX				
	2 x 15	0.50	0.44	15	WN3S30H45C	WN3S30H45CX	WN3S3045CB			
60	2x 15	0.62	0.61	15	WN3S3060C	WN3S3060CX	WN3S3060CB			
	2x 15	0.57	0.55	15	WN3S30H60C	WN3S30H60CX	WN3S30H60CB			
	20	0.69	0.68	20				WN3S2060D		
65	30	0.78	0.77	30				WN3S3060D		
	2 x 5	0.63	0.61	5				WN3S10H65CD		
	2 x 5	0.67	0.62	5	WN3S10100C	WN3S10100CX	WN3S10100CB	WN3S10100CD		
100	2 x 10	0.90	0.76	10	WN3S20S100C	WN3S20S100CX	WN3S20S100CB	WN3S20S100CD		
	2 x 10	0.89	0.73	10	WNS20S100C	WNS20S100CX	WNS20S100CB			
	2 x 10	0.70	0.63	10	WNS20H100C		WNS20H100CB			
	2 x 10	0.68	0.63	10	WN3S20H100C	WN3S20H100CX	WN3S20H100CB			
	2 x 15	0.64	0.60	15	WNS30H100C		WNS30H100CB			
	2 x 15	0.70	0.64	15	WN3S30100C	WN3S30100CX	WN3S30100CB			
	2 x 15	0.66	0.62	15	WN3S30H100C	WN3S30H100CX				
	2 x 20	0.71	0.64	20	WNS40100C					
	2 x 20	0.73	0.67	20	WN3S40100C	WN3S40100CX	WN3S40100CB			
	2 x 20	0.67	0.63	20	WNS40H100C		WNS40H100CB			
	20	0.75	0.68	20	WN3S40H100C	WN3S40H100CX	WN3S40H100CB		WN3S20100D	
	30	0.86	0.76	30					WN3S30100D	
120	2 x 15	0.95	0.71	15	WN3S30H120C	WN3S30H120CX	WN3S30H120CBT			
	2 x 20	0.95	0.72	20	WN3S40120C	WN3S40120CX	WN3S40120CBT			
150	2 x 5	0.81	0.68	5	WN3S10S150CT	WN3S10S150CXT	WN3S10S150CBT	WN3S10S150CDT		
	2 x 5	0.89	0.63	5	WN3S10H150C	WN3S10H150CXT				
	2 x 10	0.84	0.72	10	WN3S20150CT	WN3S20150CXT	WN3S20150CBT	WN3S20150CDT		
	2 x 10	1.06	0.68	10	WN3S20H150C	WN3S20H150CXT				
	2 x 15	0.81	0.67	15	WN3S30H150CT	WN3S30H150CXT	WN3S30H150CBT			
	2 x 20	0.83	0.71	20	WN3S40150CT	WN3S40150CXT	WN3S40150CBT			
	20	0.87	0.75	20				WN3S20150DT		
170	30	0.89	0.78	30				WN3S30150DT		
	2 x 15	0.81	0.67	15			WN3S30H170CBT			
	2 x 20	0.84	0.71	20			WN3S40170CBT			
200	2 x 5	0.83	0.70	5	WN3S10S200CT	WN3S10S200CXT	WN3S10S200CBT	WN3S10S200CDT		
	2 x 5	0.82	0.69	5	WN3S10200CT			WN3S10200CDT		
	2 x 5	0.81	0.68	5				WN3S10H200CDT		
	2 x 10	0.86	0.75	10	WN3S20200CT	WN3S20200CXT	WN3S20200CBT	WN3S20200CDT		
	2 x 15	0.88	0.77	15	WN3S30S200CT	WN3S30S200CXT	WN3S30S200CBT			
	2 x 15	0.85	0.73	15			WN3S30200CBT			
	2 x 20	0.87	0.75	20	WN3S40200CT	WN3S40200CXT	WN3S40200CBT			
15	0.88	0.77	15					WN3S15200YT	WN3S15200XT	
20	0.90	0.80	20							
30	0.93	0.80	30							
								WN3S20200DT		
								WN3S30200DT		

CASCO DIODES
employing series die technology for the
lowest possible t_{rr}


Types in **bold blue** represent new products
Types in **bold red italic** represent products in development

Casco Diodes for Continuous Current Mode PFC

V_{RRM} (V)	$I_{F(AV)}$ (A)	$V_F(typ)@150C$ (V)	$@I_F$ (A)	$t_{rr}(typ)@25C$ (us)	SOD113 (TO220F-2L)
600	8	2	8	12.5	 BYC58X-600



HYBRID DIODES (FRD+ STD DIODES)

Types in **bold blue** represent new products
 Types in **bold red italic** represent products in development

FRD V_{RRM} (V)	$I_{F(AV)}$ (A)	$V_f(\text{typ})@150C$ (V)	@ I_F (A)	$t_{rr}(\text{typ})@25C$ (ns)	STD V_{RRM} (V)	$I_{F(AV)}$ (A)	$V_f(\text{typ})@150C$ (V)	@ I_F (A)	TO247-3L 
600	30	1.38	30	35	1600	45	1.1	45	WNC3060D45160W


BRIDGE RECTIFIER

Types in **bold Brown** represent new products planned
 Types in **bold blue** represent new products
 Types in **bold red italic** represent products in development

V_{RRM} (V)	$I_{F(AV)}$ (A)	$V_f(\text{typ})@25C$ (V)	@ I_F (A)	$t_{rr}(\text{typ})@25C$ (us)	GBU 	GBJ 
					WNB1560U <i>WNB2560U</i> WNB1580U WNB2580U	WNB2560M WNB2580M
600	15	0.88	15	3		
	25	0.9	25	3		
800	15	0.9	15	3		
	25	0.92	25	3		



3-PHASE BRIDGE RECTIFIER

Types in **bold blue** represent new products
 Types in **bold red italic** represent products in development

V_{RRM} (V)	$I_{F(AV)}$ (A)	$V_f(\text{typ})@25C$ (V)	@ I_F (A)	WMM01 
1600	75	1.25	75	WDMF75M16

AUTO POWER DIODES

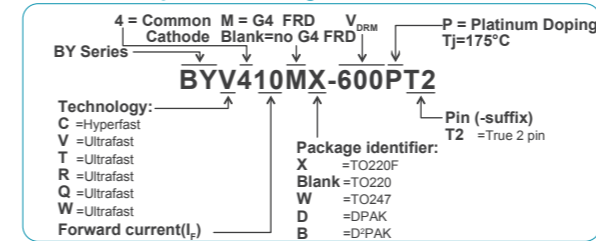
Types in **bold blue** represent new products
 Types in **bold red italic** represent products in development

V_{RRM} (V)	$I_{F(AV)}$ (A)	$V_f(\text{typ})@150C$ (V)	@ I_F (A)	$t_{rr}(\text{typ})@25C$ (ns)	TO247-2L 	SOT404 / TO263 (D ² PAK) 
					BYC30W-600PT2-A <i>BYV30W-600PT2-A</i> <i>BYV60W-600PT2-A</i>	WND45P12W-A WND60P12W-A WND35P12B-A
600	30	1.4	30	60		
	30	0.98	30	65		
	60	1.1	60	79		
1200	35	1.15	35			
	45	1.1	45			
	60	0.99	60			

ULTRAFAST POWER DIODES

Types in **bold blue** represent new products
 Types in **bold red italic** represent products in development

Power Diode part numbering



In the spotlight











Ultrafast power diodes

- Fast switching
- High voltage capability
- Low forward voltage drop
- Low leakage current(platinum doped series)
- Low thermal resistance
- Soft recovery characteristic

V _{RRM} (V)	I _{F(AV)} (A)	V _F (typ)@150C (V)	@I _F (A)	t _{rr} (typ)@25C (ns)	SMA	SMB	SMC	SOD59 (TO220-2L)	SOD113 (TO220F-2L)	IITO220-2L	SOT78 (TO220AB)	SOT186A (TO220F-3L)	SOT223	SOT428 / TO252 (DPAK)	SOT404 / TO263 (D ² PAK)	SOT226 (I ² PAK)	TO247-2L	SOT429 (TO247-3L)	SOT1259 (TO-3P)	TO-3PF
100	8 2 x 10	0.8 0.72	8 8	20 20				BYW29E-100			BYV32E-100		BYV40E-150							
150	2 x 0.75 8 2 x 10	0.5 0.8 0.72	0.5 8 8	10 20 20				BYW29E-150			BYV32E-150 BYV42E-150									
200	2 x 15 3 8 2 x 5 2 x 5 14 2 x 8 2 x 10 2 x 15 2 x 15	0.78 0.7 0.8 0.8 0.8 0.83 0.84 0.72 0.78 0.78	15 3 8 5 5 14 8 8 15 15	20 27 20 15 15 20 20 20 20 20			MUR320	BYW29E-200 BYV79E-200	BYW29EX-200		BYQ28E-200 BYQ28E-200E BYQ30E-200 BYV32E-200P BYV42E-200 BYQ42E-200 BYT28-300 BYV32E-300P	BYQ28X-200		BYW29ED-200 BYQ28ED-200PL					BYV72EW-200 BYQ72EK-200	BYQ72EK-200
300	2 x 5 2 x 10 2 x 30	0.95 0.81 0.85	5 10 30	50 9 33											BYV32E-300P			BYV430W-300P BYV430K-300P	BYV430K-300P	
400	4 9 2 x 10 2 x 15	0.8 0.9 0.87 0.95	4 8 10 15	55 50 50 35			MUR440	BYV29-400			BYV34-400							BYV74W-400		
500	9 2 x 5 14 2 x 10 2 x 15	0.9 0.95 0.9 0.87 0.95	8 5 15 10 15	50 50 50 50 50				BYV29-500 BYT79-500	BYV29X-500		BYT28-500 BYV34-500 BYV44-500	BYT28X-500			BYV29B-500					
600	1 3 4 5 5 5 8 8 8 9 9 10 10 10 10 15 15 2 x 10 2 x 10 2 x 10 2 x 15 30 30 40 2 x 30 60	0.88 0.88 0.99 1.15 0.9 1.1 0.97 1.07 0.8 1.1 0.97 1.25 1.6 0.92 1.1 1.1 1 0.96 0.92 1 1.3 0.96 0.98 0.97 1.25 1.2	1 3 4 5 5 5 8 8 8 8 9 9 10 10 10 10 15 15 10 10 10 15 15 30 30 40 30 60	45 36 29 38 45 17.5 50 60 66 24 50 17.5 20 40 35 45 58 50 50 30 20 20 85 42 52 53 79	MURS160	MURS160B MURS360B	MUR560	BYV25F-600 BYR29-600	BYV25FX-600 BYV25X-600 BYR29X-600					BYV4MD-600P BYV5ED-600P	BYV25FD-600 BYV25D-600	BYV25FB-600	BYV25G-600			
600	8 8 8 9 9 10 10 10 10 15 15 2 x 10 2 x 10 2 x 10 2 x 15 30 30 40 2 x 30	1.1 1.1 1.1 1.25 1.6 0.92 1.1 1.1 1 0.96 0.92 1 1.3 0.96 0.98 0.97 1.25	8 8 8 8 8 10 10 10 10 15 15 10 10 10 15 30 30 40 30	50 50 50 50 50 40 35 45 58 50 50 30 20 20 20 85 42 52 53			MUR860	BYV29-600P BYV29F-600 BYV10-600P	BYV29MFX-600P BYV29X-600P BYV29FX-600 BYV10X-600P	BYT10Y-600P				BYV29D-600P BYV29FD-600	BYV29B-600P BYV29FB-600	BYV29G-600P				
600	10 10 10 15 15 2 x 10 2 x 10 2 x 10 2 x 15 30 30 40 2 x 30	1.1 1.1 1.1 1 0.96 0.92 1 1.3 0.96 0.98 0.97 1.25	10 10 10 15 15 10 10 10 15 30 30 40 30	45 58 50 50 50 40 35 45 58 50 50 30 20 20 20 85 42 52 53				BYV10M-600P BYT79-600	BYV10EX-600P BYV10MX-600P					BYV10D-600P BYV10ED-600P				BYV10MB-600P		
600	60 60 8 10 10 15 20 20 30 50 80	1.2 1.1 1.13 1.2 1.5 1.35 1.5 1.25 1.06 1.05 1.2	60 60 8 10 10 15 20 20 30 50 80	53 79 56 53 55 45 50 65 78 65 85				BYV30-600P	BYV30X-600P						BYV30B-600P			BYV415W-600P BYV40W-600P BYV60W-600P BYQ60W-600PT2 BYV60W-600PT2	BYV415K-600P	BYV415J-600P BYV30JT-600P
650	8 10 10 15 20 20 30 50 80	1.07 1.2 1.5 1.35 1.5 1.25 1.06 1.05 1.2	8 10 10 15 20 20 30 50 80	60 40 56 53 55 45 50 65 85				BYR29-800	BYR29X-800P											
800	8 8	1.07 1.2	8 8	60 40																
1200	5	1.6	5	50										BYR5D-1200P						

HYPERFAST POWER DIODES

Types in **bold blue** represent new products
 Types in **bold red italic** represent products in development
 Hyperfast diodes for Continuous Current Mode PFC


V_{RRM} (V)	$I_{F(AV)}$ (A)	$V_F(\text{typ})@150C$ (V)	$@I_F$ (A)	$t_{tr}(\text{typ})@25C$ (ns)	SOD59 (TO220AC)	SOD113 (TO220F-2L)	IITO220-2L	SOT78 (TO220AB)	SOT186A (TO220F-3L)	SOT428 / TO252	SOT404 / TO263 (D ² PAK)	TO247-2L	SOT429 (TO247-3L)	TO3PF
														
400	2 x 5	0.85	5	30					BYC405X-400P					
500	5	1.15	5	16	BYC5D-500	BYC5DX-500								
	5	1.4	5	19							BYC5B-600			
	5	1.55	5	13	BYC5-600P	BYC5X-600P								
	8	1.4	8	20	BYC8D-600	BYC8DX-600								
	8	1.4	8	19	BYC8-600P	BYC8X-600P						BYC8B-600P		
	10	1.4	10	19								BYC10B-600		
	10	1.3	10	19	BYC10-600P	BYC10X-600P								
	10	1.4	10	18	BYC10D-600	BYC10DX-600								
	2 x 5	1.4	5	19				BYC10-600CT						
	15	1.4	15	22	BYC15-600P	BYC15X-600P								
	15	1.27	15	26	BYC15M-600P	BYC15M-600P				BYC15MD-600P	BYC15MB-600P			
	20	1.4	20	28								BYC20MW-600PT2		
	20	1.4	20	19	BYC20-600									
	20	1.2	20	26	BYC20D-600P	BYC20DX-600P								
	20	1.2	20	25		BYC20X-600P								
	30	1.4	30	35			BYC30MY-600PS							BYC30JT-600PS
	30	1.5	30	26										
	30	1.38	30	29	BYC30-600P	BYC30X-600P	BYC30Y-600P				BYC30B-600P	BYC30DW-600P	BYC30W-600P	BYC30WT-600P
	30	1.38	30	26								BYC30W-600PT2		
	30	1.5	30	51										
	30	1.4	30	60										
	60	1.55	60	40										
	75	1.6	75	42										
	100	1.2	100	55										
	8	1.45	8	28	BYC8M-650P	BYC8MX-650P				BYC8MD-650P	BYC8MB-650P			
	10	1.5	10	29	BYC10M-650P	BYC10MX-650P				BYC10MD-650P	BYC10MB-650P			
	12	1.6	12	30	BYC12M-650P	BYC12MX-650P				BYC12MD-650P				
	15	1.6	15	30	BYC15M-650P	BYC15MX-650P				BYC15MD-650P				
	30	1.38	30	38	BYC30M-650P	BYC30MX-650P					BYC15MB-650P			
	30	1.5	30	52	BYC30M-650PS	BYC30MX-650PS					BYC30MB-650P	BYC30MW-650PT2	BYC30MW-650PT2	
	30	1.45	30	72	BYC31M-650PS	BYC31MX-650PS					BYC30MB-650PS	BYC30MW-650PT2	BYC30MW-650PT2	
	50	1.23	50	75										
	60	1.33	60	74										
	80	1.46	80	60										

1200V HYPERFAST POWER DIODES



In the spotlight

1200V Planar Hyperfast Power Diodes

- Planar Passivated, Pt doping technology
- Fast recovery, System efficiency improvement
- Soft recovery, Reduce system EMI
- Avalanche ruggedness
- Reduces switching losses in associated MOSFET or IGBT









Types in **bold blue** represent new products
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V_{RRM} (V)	$I_{F(AV)}$ (A)	$V_F(\text{typ})@150C$ (V)	$@I_F$ (A)	$t_{tr}(\text{typ})@25C$ (ns)	SOD59 (TO220AC)	TO247-2L
						
1200V	5	2	5	42	BYC5-1200P	
	8	2	8	46	BYC8-1200P	
	15	2	15	61	BYC15-1200P	
	30	2.1	30	70	BYC30-1200P	BYC30W-1200P
	40	2.2	40	91		BYC40W-1200P
	60	2.2	60	96		BYC60W-1200P
	75	2.2	75	113		BYC75W-1200P
	100	2.2	100	115		BYC100W-1200P

STANDARD RECTIFIER

Types in **bold blue** represent new products
 Types in **bold red italic** represent products in development

V_{RRM} (V)	$I_{F(AV)}$ (A)	$V_F(\text{typ})@150C$ (V)	$@I_F$ (A)	IFSM @10ms (A)	SOD59 (TO220-2L)	SOD113A (TO220F-2L)	SOT78D (IITO220)	SOT428 / TO252 (DPAK)	SOT404 / TO263 (D ² PAK)	TO247-2L
										
600V	10	0.82	10	350						
	8	0.84	8	150		WND10M600X				
800V	10	1	10	180		WND10P08X		SK8D		
	10	1	10	180			WND10P08Y			
	35	1.15	35	400	WND35P08	WND35P08X				
1200V	35	1.15	35	400	WND35P12	WND35P12X			WND35P12B	
	8	1	8	150		WND08P16X		WND08P16D	WND35P16B	
1600V	35	1.15	35	400	WND35P16	WND35P16X				
	45	1	45	475						WND45P16W
	60	1.08	60	650						WND60P16W



WeEn
WeEn Semiconductors

04 Silicon Carbide

SiC MOSFET

SiC Diode
(SiC Diode G2 1200V)
(SiC Diode G5 650V)
(SiC Diode G6 650V)

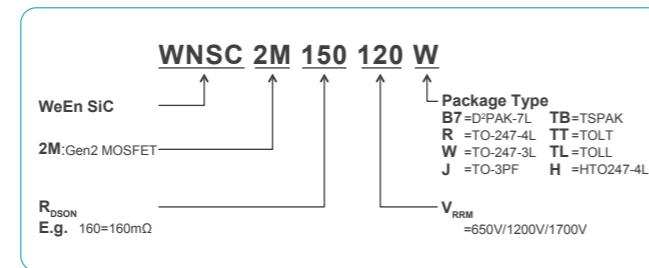
SiC Diode Auto Grade

SiC MOSFETs Auto Grade

SiC Power Module Product

SiC Bare die
(SiC Diode)
(SiC MOSFET)

SIC MOSFET



In the spotlight

Gen-2 SiC MOSFET

- High Threshold Voltage ~2.6V@ 25°C (2V@ 125°C)
- Capable of 15-18V gate-drive voltage
- Gate driving voltage -12~22V, reliability confirmed.
- Reduced gate-source ringing
- Low thermal resistance
- High Blocking Voltage(Beyond 1500V)
- Low Rds(on)@ High Temperature

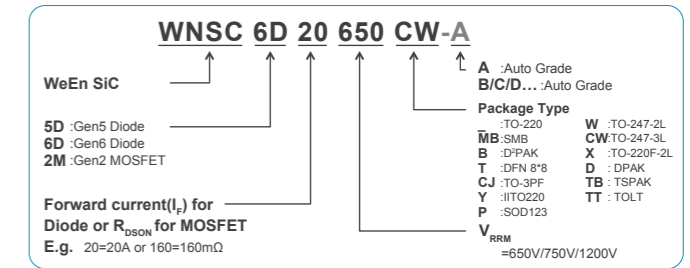
In the spotlight

Top-side Cooling Package

- Top side cooling(TCS) structure
- Low thermal impedance
- Low EMC noise
- Low circuit inductance
- Topside cooling makes SiC chip down-size possible

V_{BRDS} (V)	$R_{DS(on)}$ (TYP) @15Vgs @25°C (m Ω)	$R_{DS(on)}$ (TYP) @18Vgs @25°C (m Ω)	T_j (max)°C	Qualification	TO247-3L	TO247-4L	TO263-7L (D ² PAK-7L)	TO-3PF	TSPAK	TOLT	TOLL	HTO247-4L
650	15	12	175	Industrial	WNSC2M15065W	WNSC2M15065R	WNSC2M15065B7					
	20	16	175	Industrial		WNSC2M20065R	WNSC2M20065B7		WNSC2M20065TB	WNSC2M20065TT		
	25	20	175	Industrial		WNSC2M25065R	WNSC2M25065B7			WNSC2M25065TT		
	33	26	175	Industrial	WNSC2M30065W	WNSC2M30065R	WNSC2M30065B7			WNSC2M30065TT		
	45	33	175	Industrial	WNSC2M45065W	WNSC2M45065R	WNSC2M45065B7			WNSC2M45065TT	WNSC2M45065TL	
	55	43	175	Industrial	WNSC2M55065W	WNSC2M55065R	WNSC2M55065B7			WNSC2M55065TT	WNSC2M55065TL	
	70	55	175	Industrial	WNSC2M70065W	WNSC2M70065R	WNSC2M70065B7			WNSC2M70065TT	WNSC2M70065TL	
	120	80	175	Industrial	WNSC2M120065W	WNSC2M120065R	WNSC2M120065B7				WNSC2M120065TL	
1200	160	110	175	Industrial	WNSC2M160065W		WNSC2M160065B7				WNSC2M160065TL	
	12	10	175	Industrial		WNSC2M12120R			WNSC2M12120TB			
	20	17	175	Industrial		WNSC2M20120R	WNSC2M20120B7		WNSC2M20120TB			
	30	26	175	Industrial		WNSC2M30120R	WNSC2M30120B7		WNSC2M30120TB			
	40	35	175	Industrial	WNSC2M40120W	WNSC2M40120R	WNSC2M40120B7		WNSC2M40120TB			WNSC2M40120RH
	60	51	175	Industrial	WNSC2M60120W	WNSC2M60120R	WNSC2M60120B7					
	75	64	175	Industrial	WNSC2M75120W	WNSC2M75120R	WNSC2M75120B7		WNSC2M75120TB			
1700	1000	750	175	Industrial	WNSC2M150120W	WNSC2M150120R	WNSC2M150120B7					
					WNSC2M1K0170W		WNSC2M1K0170B7	WNSC2M1K0170J				

SiC Diode Auto Grade

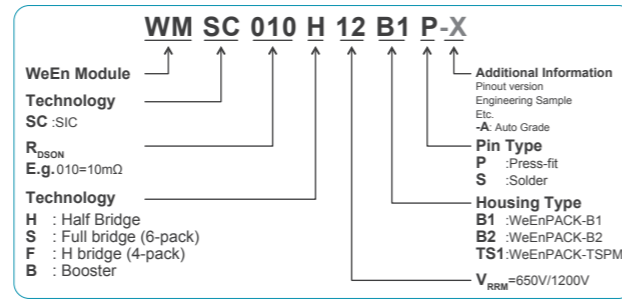


V_{RRM} (V)	$I_{F(AV)}$ (A)	$V_F @ I_F$ (typ) @ 25°C (V)	Qualification	TO220-2L True 2 pin	TO247-2L True 2 pin	TO247-3L	TO263-2L (D ² PAK-2L) True 2 pin	DPAK	SMB	TSPAK
650	2	1.26	Automotive					WNSC6D02650D-A	WNSC6D02650MB	
	10	1.45	Automotive		WNSC5D10650W-A					
	10	1.26	Automotive	WNSC6D10650-A	WNSC6D20650W-A		WNSC6D10650BT2-A WNSC6D20650BT2-A WNSC6D30650BT2-A			
	20	1.26	Automotive	WNSC6D20650-A	WNSC6D20650W-A					
	30	1.26	Automotive							
	2*10	1.26	Automotive			WNSC6D20650CW-A WNSC6D30650CW-A WNSC6D40650CW-A				
750	2*15	1.26	Automotive							
	2*20	1.26	Automotive							
1200	10	1.26	Automotive							WNSC6D10750TB-A WNSC6D20750TB-A
	20	1.26	Automotive							WNSC2D101200TB-A
	10	1.42	Automotive	WNSC2D101200-A	WNSC2D101200W-A		WNSC2D101200BT2-A WNSC2D151200BT2-A WNSC2D201200BT2-A			WNSC2D101200TB-A
	15	1.42	Automotive							
	20	1.45	Automotive	WNSC2D201200-A	WNSC2D201200W-A					WNSC2D201200TB-A
	2*10	1.42	Automotive			WNSC2D201200CW-A WNSC2D301200CW-A WNSC2D401200CW-A				

SiC MOSFETs Auto Grade

V_{BRDS} (V)	$R_{DS(on)}$ (typ) @15Vgs@25°C (mΩ)	$R_{DS(on)}$ (typ) @18Vgs@25°C (mΩ)	$T_J(max)$ (°C)	Qualification	SOT429 (TO247-3L)	SOT429 (TO247-4L)	TO263-7L (D ² PAK-7L)	TSPAK
750	15	12	175	Automotive	WNSC2M15075W-A	WNSC2M15075R-A	WNSC2M15075B7-A	
	20	15	175	Automotive		WNSC2M20075R-A	WNSC2M20075B7-A	
	24	19	175	Automotive		WNSC2M25075R-A	WNSC2M25075B7-A	WNSC2M25075TB-A
	30	24	175	Automotive	WNSC2M30075W-A	WNSC2M30075R-A	WNSC2M30075B7-A	
	40	30	175	Automotive	WNSC2M40075W-A	WNSC2M40075R-A	WNSC2M40075B7-A	WNSC2M40075TB-A
	52	40	175	Automotive	WNSC2M55075W-A	WNSC2M55075R-A	WNSC2M55075B7-A	WNSC2M55075TB-A
1200	70	55	175	Automotive	WNSC2M70075W-A	WNSC2M70075R-A	WNSC2M70075B7-A	WNSC2M75075TB-A
	20	17	175	Automotive		WNSC2M20120R-A	WNSC2M20120B7-A	WNSC2M20120TB-A
	30	26	175	Automotive		WNSC2M30120R-A	WNSC2M30120B7-A	
	40	35	175	Automotive	WNSC2M40120W-A	WNSC2M40120R-A	WNSC2M40120B7-A	WNSC2M40120TB-A
	60	51	175	Automotive	WNSC2M60120W-A	WNSC2M60120R-A	WNSC2M60120B7-A	
	75	64	175	Automotive	WNSC2M75120W-A	WNSC2M75120R-A	WNSC2M75120B7-A	WNSC2M75120TB-A
1700	150	128	175	Automotive	WNSC2M150120W-A		WNSC2M150120B7-A	
	1000	750	175	Automotive	WNSC2M1K0170W-A		WNSC2M1K0170B7-A	

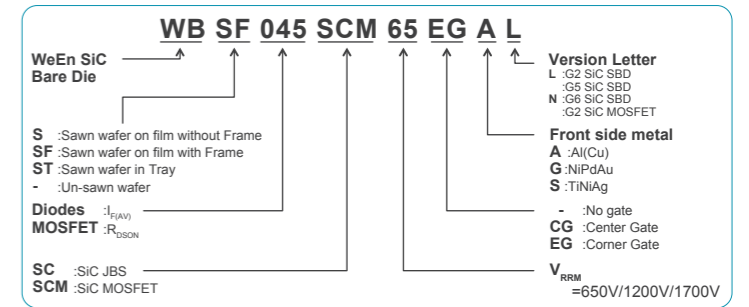
SiC Power Module Product



P: Press Fit, S: Solder Pin

Package	Configuration	Part Number	Voltage (V)	R _{DSON} (Typ) @18Vgs@25°C (mΩ)	R _{DSON} (Typ) @15Vgs@25°C (mΩ)		
WeEnPACK-B1	Half bridge	WMSC008H12B1P(S)	1200	6	8		
		WMSC010H12B1P(S)	1200	9.5	11		
		WMSC016H12B1P(S)	1200	14	16		
		WMSC020H12B1P(S)	1200	17	20		
		WMSC030H12B1P(S)	1200	27	30		
		WMSC040H12B1P(S)	1200	34	40		
	4 pack	WMSC020F12B1P(S)	1200	17	20		
		WMSC020F12B1P(S)-B	1200	17	20		
		WMSC030F12B1P(S)-B	1200	27	30		
		WMSC040F12B1P(S)	1200	34	40		
		WMSC040F12B1P(S)-B	1200	34	40		
		WMSC020S12B1P(S)	1200	17	20		
	6 pack	WMSC030S12B1P(S)	1200	27	30		
		WMSC040S12B1P(S)	1200	34	40		
		WMSC040S12B1S-C	1200	34	40		
		WMSC060S12B1P(S)	1200	50	60		
		Booster	Single booster	WMSC020B12B1P(S)-B	1200	17	20
			Dual booster	WMSC020B12B1P(S)-C	1200	17	20
WMSC030B12B1P(S)-C	1200			27	30		
WeEnPACK-B2	Half bridge	WMSC004H12B2P(S)	1200	3.6	4		
		WMSC004H12B2P(S)-D	1200	3.6	4		
		WMSC006H12B2P(S)	1200	5.5	6		
	4 pack	WMSC008H12B2P(S)	1200	6.5	8		
		WMSC011F12B2P(S)	1200	9.5	11		
		WMSC016F12B2P(S)	1200	14	16		
WeEnPACK-TSPM	Half bridge	WMSC020H12TS1-A	1200	17	20		
		WMSC030H12TS1-A	1200	27	30		
		WMSC040H12TS1-A	1200	34	40		
		WMSC060H12TS1-A	1200	51	60		
		WMSC075H12TS1-A	1200	64	75		
		WMSC045H06TS1-A	650	45	36		

SiC Bare die



SiC Diode

"x" for Front Side Metal - A : Al(Cu), G: NiPdAu, S: TiNiAg

V _{RRM} (V)	I _{F(AV)} (A)	V _{F@I_F} (typ)@ 25°C(V)	Part Number	Description	
1200	10	1.42	WB10SC120xL	G2 SiC diode / 1200V / 10A	
	15	1.42	WB15SC120xL	G2 SiC diode / 1200V / 15A	
	20	1.45	WB20SC120xL	G2 SiC diode / 1200V / 20A	
	25	1.42	WB25SC120xL	G2 SiC diode / 1200V / 25A	
	30	1.42	WB30SC120xL	G2 SiC diode / 1200V / 30A	
	50	1.42	WB50SC120xL	G2 SiC diode / 1200V / 50A	
	60	1.42	WB60SC120xL	G2 SiC diode / 1200V / 60A	
	650	4	1.45	WB04SC65xL	G6 SiC diode / 650V / 4A
		6	1.45	WB06SC65xL	G5 SiC diode / 650V / 6A
		8	1.45	WB08SC65xL	G5 SiC diode / 650V / 8A
10		1.45	WB10SC65xL	G5 SiC diode / 650V / 10A	
12		1.45	WB12SC65xL	G5 SiC diode / 650V / 12A	
20		1.45	WB20SC65xL	G5 SiC diode / 650V / 20A	
30		1.45	WB30SC65xL	G5 SiC diode / 650V / 30A	
2		1.26	WB02SC65xN	G5 SiC diode / 650V / 2A	
4		1.26	WB04SC65xN	G6 SiC diode / 650V / 4A	
6		1.26	WB06SC65xN	G6 SiC diode / 650V / 6A	
8		1.26	WB08SC65xN	G6 SiC diode / 650V / 8A	
10		1.29	WB10SC65xN	G6 SiC diode / 650V / 10A	
16		1.29	WB16SC65xN	G6 SiC diode / 650V / 16A	
20		1.26	WB20SC64xN	G6 SiC diode / 650V / 20A	
30		1.26	WB30SC65xN	G6 SiC diode / 650V / 30A	

SiC MOSFET

"x" for Front Side Metal - A : Al(Cu), G: NiPdAu, S: TiNiAg

V _{BRDS} (V)	R _{DSON} (TYP) @15Vgs @ 25°C (mΩ)	T _J (max)	Part Number	Description
1200	12	175	WB012SCM120CGxN	SiC MOSFET / 1200V / 12mΩ
	20	175	WB020SCM120CGxN	SiC MOSFET / 1200V / 20mΩ
	30	175	WB030SCM120CGxN	SiC MOSFET / 1200V / 30mΩ
	40	175	WB040SCM120CGxN	SiC MOSFET / 1200V / 40mΩ
	60	175	WB060SCM120CGxN	SiC MOSFET / 1200V / 60mΩ
	75	175	WB075SCM120CGxN	SiC MOSFET / 1200V / 75mΩ
1700	150	175	WB150SCM120CGxN	SiC MOSFET / 1200V / 150mΩ
	1000	175	WB1K0SCM170CGxN	SiC MOSFET / 1700V / 1000mΩ



WeEn
WeEn Semiconductors

05

Insulated Gate Bipolar Transistors

650V Discrete

1200V Discrete

1400V Discrete

IGBT Power Module Product

650V Discrete

Types in **bold red italic** represent products in development

BV _{ce(min)} (V)	I _{C@100°C} (A)	V _{cesat} (typ.) @25°C (V)	E _{off} (typ.) @25°C (mJ)	E _{on} (typ.) @25°C (mJ)	SCWT (uS)	I _{F@100°C} (A)	Q _{rr} (typ.) @25°C (mC)	T _{jmax} (°C)	TO247P	TO247-4L	TO247	TO3PF	TO220	TO220F	TO263
650	150	1.5	3	-	5	150	-	175	<i>WG150N65MFP1</i>						
650	100	1.5	2	-	5	100	-	175	<i>WG100N65MFP1</i>						
650	75	1.5	1.44	3.8	5	75	550	175			WG75N65MFW1				
650	75	1.5	1.44	3.8	5	50	321	175			WG75N65MAW1				
650	75	1.5	1	2.68	5	75	770	175		WG75N65MFR1					
650	75	1.7	1	3.8	-	75	550	175			WG75N65HFW1				
650	75	1.7	1	3.8	-	50	321	175			WG75N65HAW1				
650	75	1.7	1	3.8	-	75	550	175		WG75N65HFR1					
650	60	1.7	0.84	1.8	-	60	350	175			WG60N65HFW1				
650	50	1.7	0.9	2	5	60	350	175			WG50N65MFW1				
650	50	1.3	1.12	1.69	-	10	646	175				WG50N65LDJ1			
650	50	1.3	1.12	1.18	-	10	221	175				WG50N65LSJ1			
650	50	1.3	1.12	1.18	-	30	221	175			WG50N65LAW1				
650	50	1.55	0.72	1.8	5	10	646	175			WG50N65MDW1				
650	50	1.55	0.72	1.42	5	30	548	175			WG50N65MAW1				
650	50	1.55	0.72	1.38	5	50	321	175			WG50N65MFW1				
650	50	1.55	0.65	1.24	-	30	221	175			WG50N65HAW1				
650	50	1.55	0.65	1.35	-	50	321	175			WG50N65HFW1				
650	50	1.55	0.4	0.95	-	50	454	175		WG50N65HFR1					
650	50	1.55	0.65	0.6	-	10	148	175							
650	40	1.5	1	1.7	10	30	646	175			WG40N65DFW				WG50N65HDB1
650	40	1.5	1	1.7	10	30	646	175				WG40N65DFJ			
650	30	1.55	0.3	0.6	-	10	148	175			WG30N65HAW1				
650	30	1.55	0.3	0.8	-	30	336	175			WG30N65HFW1				
650	30	1.55	0.3	0.8	-	30	336	175							WG30N65HFB1
650	30	1.55	0.3	0.6	-	10	148	175					WG30N65HA1		
650	30	1.55	0.3	0.6	-	10	148	175						WG30N65HAX1	
650	30	1.55	0.3	-	-	-	-	175				WG30N65HJ1			
650	30	1.6	0.38	0.65	5	10	148	175			WG30N65MAW1				
650	30	1.6	0.38	0.8	5	30	336	175			WG30N65MFW1				
650	30	1.6	0.38	0.65	5	10	148	175							WG30N65MFB1
650	30	1.6	0.38	0.65	5	10	148	175						WG30N65MAX1	

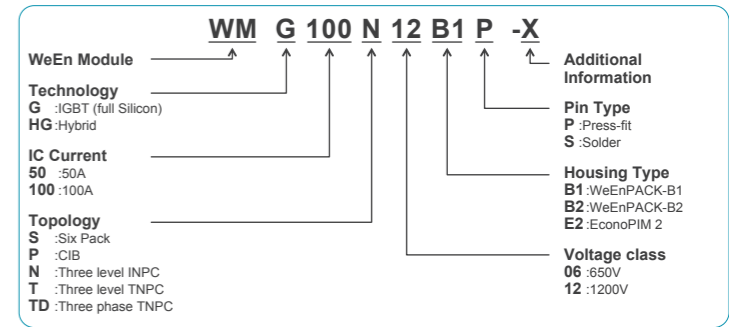
1200V Discrete

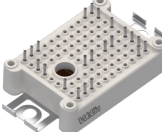
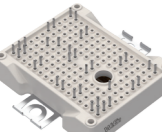
BV _{ce(min)} (V)	I _{C@100°C} (A)	V _{cesat} (typ.) @25°C (V)	E _{off} (typ.) @25°C (mJ)	E _{on} (typ.) @25°C (mJ)	SCWT (uS)	I _{F@100°C} (A)	Q _{rr} (typ.) @25°C (mC)	T _{jmax} (°C)	TO247P	TO247-4L	TO247	TO3PF	TO220	TO220F	TO263
1200	75	1.68	3.2	-	10	75	-	175	WG75N120MFP1						
1200	75	1.68	3.2	-	10	75	-	175	WG75N120MAP1						
1200	75	1.68	3.2	-	10	40	1660	175			WG75N120MAW1				
1200	75	1.8	2.1	-	-	75	-	175	WG75N120HFP1						
1200	75	1.8	2.1	-	-	75	-	175	WG75N120HAP1						
1200	75	1.8	2.1	-	-	40	1660	175			WG75N120HAW1				
1200	40	2.2	1	2.5	10	40	1660	175			WG40N120HFW1				
1200	40	2.2	1	2	10	20	850	175			WG40N120HAW1				
1200	40	2.2	0.8	2	10	40	2100	175		WG40N120HFR1					
1200	40	1.68	1.7	2.5	10	40	1660	175			WG40N120MFW1				
1200	40	1.68	1.7	2	10	20	850	175			WG40N120MAW1				
1200	40	1.7	1.1	2.5	-	40	1660	175			WG40N120UFW1				
1200	40	1.7	1.1	2	-	20	850	175			WG40N120UAW1				
1200	40	1.7	1.1	2	-	20	850	175		WG40N120UAR1					
1200	25	1.68	1.15	-	10	25	-	175							WG25N120MFB1
1200	25	1.68	1.15	-	10	25	-	175			WG25N120MFW1				
1200	15	1.8	0.45	-	10	15	-	175			WG15N120MFW1				

1400V Discrete

BV _{ce(min)} (V)	I _{C@100°C} (A)	V _{cesat} (typ.) @25°C (V)	E _{off} (typ.) @25°C (mJ)	E _{on} (typ.) @25°C (mJ)	SCWT (uS)	I _{F@100°C} (A)	Q _{rr} (typ.) @25°C (mC)	T _{jmax} (°C)	TO247P	TO247-4L	TO247	TO3PF	TO220	TO220F	TO263
1400	40	1.65	-	-	-	40	-	175			WG40R140W1				
1400	30	1.65	-	-	-	30	-	175			WG30R140W1				
1400	20	1.65	-	-	-	20	-	175			WG20R140W1				
1400	15	1.65	-	-	-	15	-	175			WG15R140W1				

IGBT Power Module Product



Package	Configuration	Part Number	Voltage Class (V)	I _C MAX (A)	Die Combination		
	WeEnPACK-B1	Six Pack	WMG20S06B1S	650	20	IGBT + FRD	
			WMG30S06B1S	650	30		
		Three Level TNPC	WMG50S06B1S	650	50		
			WMG25S12B1S	1200	25		
			WMG80T12B1P	1200	40		
	WeEnPACK-B2	Six Pack	WMG75S06B2S	650	75		IGBT + FRD
			WMG50S12B2S	1200	50		
			WMG50N06B2S	650	50		
			WMG75N06B2S	650	75		
			WMG100N06B2S	650	100		
		Three Level TNPC	WMG150N06B2S	650	150		
			WMHG50N06B2S	650	50		
			WMHG75N06B2S	650	75		
			WMHG100N06B2S	650	100		
			WMHG150N06B2S	650	150		
		Three Level TNPC	WMG80T12B2P	1200	80		
			WMG100T12B2P	1200	100		
			WMG150T12B2P	1200	150		
		Three Level TNPC	WMG25TF12B2P	1200	25		
			WMG50P12B2S	1200	50		
CIB	WMG35P12B2S	1200	35				
	EconoPIM 2	CIB	WMG50P12E2S	1200	50	IGBT + FRD	
WMG35P12E2S			1200	35			



WeEn
WeEn Semiconductors

06

Transient Voltage Suppressors

200W TVS DIODES, SOD SERIES

400W TVS DIODES, P4SOD SERIES

400W TVS DIODES, SMAJ SERIES

600W TVS DIODES, P6SMAL SERIES

600W TVS DIODES, P6SMBJ SERIES

600W TVS DIODES, SMBJ SERIES

1000W TVS DIODES, P1KSMBJ SERIES

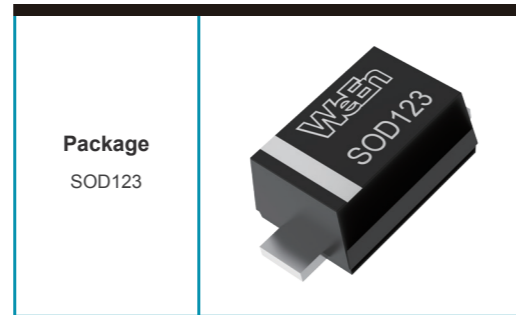
1500W TVS DIODES, SMCJ SERIES

3000W TVS DIODES, SMDJ SERIES

5000W TVS DIODES, 5.0SMDJ SERIES

6000W TVS DIODES, SM8S SERIES

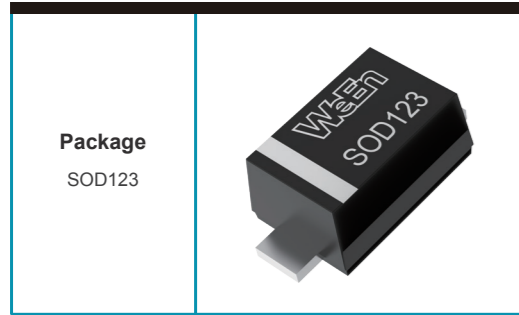
200W TVS DIODES, SOD123 SERIES



	SPEC	Requirement
Package	SOD123	HF + UL94V0+RoHS +Pb free plating
Power	200W	10/1000 pulse
Tj	-65C~150C	
Tstg	150C	
ESD	30KV(Air) 30KV(contact)	IEC-61000-4-2

Uni-direction	Bi-direction	Package	I _T (mA)	V _{BR} (V) --min.	V _{BR} (V) --max.	V _R (V)	I _R (uA) --max.	10/1000us Max peak pulse currnt I _{pp} (A)	10/1000us max clamp voltage V _c @ I _{pp} (V)
SOD5.0A	SOD5.0CA	SOD123	10	6.45	6.98	5	200	21.7	9.2
SOD6.0A	SOD6.0CA	SOD123	10	6.8	7.32	6	200	19.4	10.3
SOD6.5A	SOD6.5CA	SOD123	10	7.27	7.92	6.5	150	17.9	11.2
SOD7.0A	SOD7.0CA	SOD123	10	7.82	8.57	7	75	16.7	12
SOD8.0A	SOD8.0CA	SOD123	1	8.95	9.76	8	25	14.7	13.6
SOD9.0A	SOD9.0CA	SOD123	1	10.08	11.03	9	5	13	15.4
SOD10A	SOD10CA	SOD123	1	11.21	12.19	10	2.5	11.8	17
SOD11A	SOD11CA	SOD123	1	12.32	13.38	11	2.5	11.1	18.2
SOD12A	SOD12CA	SOD123	1	13.43	14.57	12	2.5	10.1	19.9
SOD13A	SOD13CA	SOD123	1	14.51	15.79	13	1	9.3	21.5
SOD14A	SOD14CA	SOD123	1	15.72	17.08	14	1	8.6	23.2
SOD15A	SOD15CA	SOD123	1	16.83	18.37	15	1	8.2	24.4
SOD16A	SOD16CA	SOD123	1	17.93	19.56	16	1	7.7	26
SOD17A	SOD17CA	SOD123	1	19.08	20.72	17	1	7.2	27.6
SOD18A	SOD18CA	SOD123	1	20.19	21.9	18	1	6.8	29.2
SOD20A	SOD20CA	SOD123	1	22.41	24.28	20	1	6.2	32.4
SOD22A	SOD22CA	SOD123	1	24.63	26.66	22	1	5.6	35.5
SOD24A	SOD24CA	SOD123	1	26.95	29.23	24	1	5.1	38.9
SOD26A	SOD26CA	SOD123	1	29.12	31.67	26	1	4.8	42.1
SOD28A	SOD28CA	SOD123	1	31.33	34.16	28	1	4.4	45.4
SOD30A	SOD30CA	SOD123	1	33.55	36.54	30	1	4.1	48.4
SOD33A	SOD33CA	SOD123	1	36.98	40.3	33	1	3.8	53.3
SOD36A	SOD36CA	SOD123	1	40.3	43.9	36	1	3.4	58.1
SOD40A	SOD40CA	SOD123	1	44.7	48.8	40	1	3.1	64.5
SOD43A	SOD43CA	SOD123	1	48.2	52.4	43	1	2.9	69.4
SOD45A	SOD45CA	SOD123	1	50.4	54.9	45	1	2.8	72.7
SOD48A	SOD48CA	SOD123	1	53.7	58.5	48	1	2.6	77.4
SOD51A	SOD51CA	SOD123	1	57.1	62.3	51	1	2.4	82.4
SOD54A	SOD54CA	SOD123	1	60.5	65.8	54	1	2.3	87.1
SOD58A	SOD58CA	SOD123	1	64.9	70.6	58	1	2.1	93.6
SOD60A	SOD60CA	SOD123	1	67.2	73.1	60	1	2.1	96.8
SOD64A	SOD64CA	SOD123	1	71.7	77.9	64	1	1.9	103
SOD70A	SOD70CA	SOD123	1	78.4	85.3	70	1	1.7	113
SOD75A	SOD75CA	SOD123	1	84	91.4	75	1	1.6	121
SOD78A	SOD78CA	SOD123	1	87.4	95	78	1	1.6	126
SOD85A	SOD85CA	SOD123	1	95.2	103.2	85	1	1.5	137

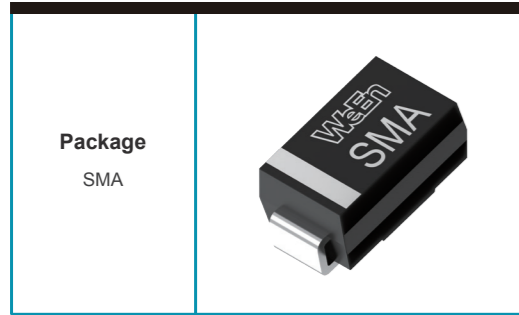
400W TVS DIODES, P4SOD123 SERIES



	SPEC	Requirement
Package	SOD123	HF + UL94V0+RoHS +Pb free plating
Power	400W	10/1000 pulse
Tj	-65C~150C	
Tstg	150C	
ESD	30KV(Air) 30KV(contact)	IEC-61000-4-2

Uni-direction	Bi-direction	Package	I _T (mA)	V _{BR} (V) --min.	V _{BR} (V) --max.	V _R (V)	I _R (uA) --max.	10/1000us Max peak pulse currnt I _{pp} (A)	10/1000us max clamp voltage V _c @ I _{pp} (V)
P4SOD5.0A	P4SOD5.0CA	SOD123	10	6.4	7	5	200	43.5	9.2
P4SOD6.0A	P4SOD6.0CA	SOD123	10	6.67	7.37	6	200	38.8	10.3
P4SOD6.5A	P4SOD6.5CA	SOD123	10	7.22	7.98	6.5	125	35.7	11.2
P4SOD7.0A	P4SOD7.0CA	SOD123	10	7.78	8.6	7	75	33.3	12
P4SOD8.0A	P4SOD8.0CA	SOD123	1	8.89	9.83	8	25	29.4	13.6
P4SOD9.0A	P4SOD9.0CA	SOD123	1	10	11.1	9	5	26	15.4
P4SOD10A	P4SOD10CA	SOD123	1	11.1	12.3	10	2.5	23.5	17
P4SOD11A	P4SOD11CA	SOD123	1	12.2	13.5	11	1	22	18.2
P4SOD12A	P4SOD12CA	SOD123	1	13.3	14.7	12	1	20.1	19.9
P4SOD13A	P4SOD13CA	SOD123	1	14.4	15.9	13	1	18.6	21.5
P4SOD14A	P4SOD14CA	SOD123	1	15.6	17.2	14	1	17.2	23.2
P4SOD15A	P4SOD15CA	SOD123	1	16.7	18.5	15	1	16.4	24.4
P4SOD16A	P4SOD16CA	SOD123	1	17.8	19.7	16	1	15.4	26
P4SOD17A	P4SOD17CA	SOD123	1	18.9	20.9	17	1	14.5	27.6
P4SOD18A	P4SOD18CA	SOD123	1	20	22.1	18	1	13.7	29.2
P4SOD20A	P4SOD20CA	SOD123	1	22.2	24.5	20	1	12.3	32.4
P4SOD22A	P4SOD22CA	SOD123	1	24.4	26.9	22	1	11.3	35.5
P4SOD24A	P4SOD24CA	SOD123	1	26.7	29.5	24	1	10.3	38.9
P4SOD26A	P4SOD26CA	SOD123	1	28.9	31.9	26	1	9.5	42.1
P4SOD28A	P4SOD28CA	SOD123	1	31.1	34.4	28	1	8.8	45.4
P4SOD30A	P4SOD30CA	SOD123	1	33.3	36.8	30	1	8.3	48.4
P4SOD33A	P4SOD33CA	SOD123	1	36.7	40.6	33	1	7.5	53.3
P4SOD36A	P4SOD36CA	SOD123	1	40	44.2	36	1	6.9	58.1
P4SOD40A	P4SOD40CA	SOD123	1	44.4	49.1	40	1	6.2	64.5
P4SOD43A	P4SOD43CA	SOD123	1	47.8	52.8	43	1	5.8	69.4
P4SOD45A	P4SOD45CA	SOD123	1	50	55.3	45	1	5.5	72.7
P4SOD48A	P4SOD48CA	SOD123	1	53.3	58.9	48	1	5.2	77.4
P4SOD51A	P4SOD51CA	SOD123	1	56.7	62.7	51	1	4.9	82.4
P4SOD54A	P4SOD54CA	SOD123	1	60	66.3	54	1	4.6	87.1
P4SOD58A	P4SOD58CA	SOD123	1	64.4	71.2	58	1	4.3	93.6
P4SOD60A	P4SOD60CA	SOD123	1	66.7	73.7	60	1	4.1	96.8
P4SOD64A	P4SOD64CA	SOD123	1	71.1	78.6	64	1	3.9	103
P4SOD70A	P4SOD70CA	SOD123	1	77.8	86	70	1	3.5	113
P4SOD75A	P4SOD75CA	SOD123	1	83.3	92.1	75	1	3.3	121
P4SOD78A	P4SOD78CA	SOD123	1	86.7	95.8	78	1	3.2	126
P4SOD85A	P4SOD85CA	SOD123	1	94.4	104	85	1	2.9	137

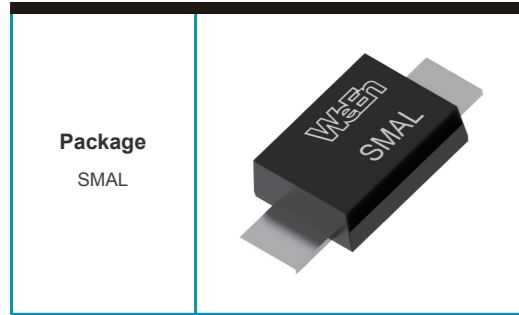
400W TVS DIODES, SMAJ SERIES



	SPEC	Requirement
Package	SMA (J lead)	HF + UL94V0+RoHS +Pb free plating
Power	400W	10/1000 pulse
Tj	-65C~150C	
Tstg	150C	
ESD	30KV(Air) 30KV(contact)	IEC-61000-4-2

Uni-direction	Bi-direction	Package	I _T (mA)	V _{BR} (V) --min.	V _{BR} (V) --max.	V _R (V)	I _R (uA) --max.	10/1000us Max peak pulse currnt I _{pp} (A)	10/1000us max clamp voltage V _c @ I _{pp} (V)
SMAJ5.0A	SMAJ5.0CA	SMA	10	6.45	6.98	5	400	43.5	9.2
SMAJ6.0A	SMAJ6.0CA	SMA	10	6.8	7.32	6	400	38.8	10.3
SMAJ6.5A	SMAJ6.5CA	SMA	10	7.27	7.92	6.5	250	35.7	11.2
SMAJ7.0A	SMAJ7.0CA	SMA	10	7.82	8.57	7	100	33.3	12
SMAJ8.0A	SMAJ8.0CA	SMA	1	8.95	9.76	8	50	29.4	13.6
SMAJ9.0A	SMAJ9.0CA	SMA	1	10.1	11	9	10	26	15.4
SMAJ10A	SMAJ10CA	SMA	1	11.21	12.19	10	5	23.5	17
SMAJ11A	SMAJ11CA	SMA	1	12.32	13.38	11	1	22	18.2
SMAJ12A	SMAJ12CA	SMA	1	13.43	14.57	12	1	20.1	19.9
SMAJ13A	SMAJ13CA	SMA	1	14.54	15.76	13	1	18.6	21.5
SMAJ14A	SMAJ14CA	SMA	1	15.75	17.04	14	1	17.2	23.2
SMAJ15A	SMAJ15CA	SMA	1	16.86	18.34	15	1	16.4	24.4
SMAJ16A	SMAJ16CA	SMA	1	17.97	19.52	16	1	15.4	26
SMAJ17A	SMAJ17CA	SMA	1	19.08	20.72	17	1	14.5	27.6
SMAJ18A	SMAJ18CA	SMA	1	20.19	21.9	18	1	13.7	29.2
SMAJ20A	SMAJ20CA	SMA	1	22.41	24.28	20	1	12.3	32.4
SMAJ22A	SMAJ22CA	SMA	1	24.63	26.66	22	1	11.3	35.5
SMAJ24A	SMAJ24CA	SMA	1	26.95	29.23	24	1	10.3	38.9
SMAJ26A	SMAJ26CA	SMA	1	29.12	31.67	26	1	9.5	42.1
SMAJ28A	SMAJ28CA	SMA	1	31.33	34.16	28	1	8.8	45.4
SMAJ30A	SMAJ30CA	SMA	1	33.55	36.54	30	1	8.3	48.4
SMAJ33A	SMAJ33CA	SMA	1	36.98	40.3	33	1	7.5	53.3
SMAJ36A	SMAJ36CA	SMA	1	40.3	43.9	36	1	6.9	58.1
SMAJ40A	SMAJ40CA	SMA	1	44.7	48.8	40	1	6.2	64.5
SMAJ43A	SMAJ43CA	SMA	1	48.2	52.4	43	1	5.8	69.4
SMAJ45A	SMAJ45CA	SMA	1	50.4	54.9	45	1	5.5	72.7
SMAJ48A	SMAJ48CA	SMA	1	53.7	58.5	48	1	5.2	77.4
SMAJ51A	SMAJ51CA	SMA	1	57.1	62.3	51	1	4.9	82.4
SMAJ54A	SMAJ54CA	SMA	1	60.5	65.8	54	1	4.6	87.1
SMAJ58A	SMAJ58CA	SMA	1	64.9	70.7	58	1	4.3	93.6
SMAJ60A	SMAJ60CA	SMA	1	67.2	73.2	60	1	4.1	96.8
SMAJ64A	SMAJ64CA	SMA	1	71.6	78	64	1	3.9	103
SMAJ70A	SMAJ70CA	SMA	1	78.4	85.4	70	1	3.5	113
SMAJ75A	SMAJ75CA	SMA	1	83.9	91.5	75	1	3.3	121
SMAJ78A	SMAJ78CA	SMA	1	87.4	95.1	78	1	3.2	126
SMAJ85A	SMAJ85CA	SMA	1	95.1	103.3	85	1	2.9	137
SMCJ90A	SMCJ90CA	SMA	1	100	111	90	1	2.8	146
SMCJ100A	SMCJ100CA	SMA	1	111	123	100	1	2.5	162
SMCJ110A	SMCJ110CA	SMA	1	122	135	110	1	2.3	177
SMCJ120A	SMCJ120CA	SMA	1	133	147	120	1	2.1	193
SMCJ130A	SMCJ130CA	SMA	1	144	159	130	1	1.9	209
SMCJ150A	SMCJ150CA	SMA	1	167	185	150	1	1.7	243
SMCJ160A	SMCJ160CA	SMA	1	178	197	160	1	1.6	259
SMCJ170A	SMCJ170CA	SMA	1	189	209	170	1	1.5	275
SMCJ180A	SMCJ180CA	SMA	1	201	222	180	1	1.4	292
SMCJ190A	SMCJ190CA	SMA	1	209	231	190	1	1.4	304
SMCJ200A	SMCJ200CA	SMA	1	224	247	200	1	1.3	324
SMCJ220A	SMCJ220CA	SMA	1	246	272	220	1	1.1	356

600W TVS DIODES, P6SMAL SERIES



	SPEC	Requirement
Package	SMA (L-lead)	HF + UL94V0+RoHS +Pb free plating
Power	600W	10/1000 pulse
Tj	-65C~150C	
Tstg	150C	
ESD	30KV(Air) 30KV(contact)	IEC-61000-4-2

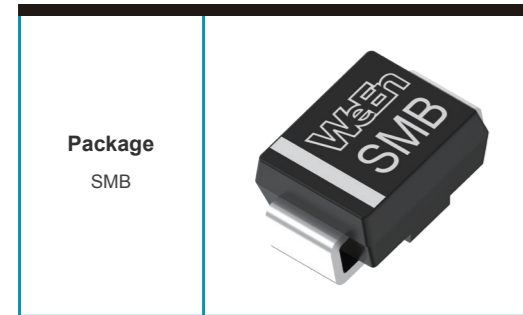
Uni-direction	Package	I _T (mA)	V _{BR} (V) --min.	V _{BR} (V) --max.	V _R (V)	I _R (uA) --max.	10/1000us Max peak pulse currnt I _{pp} (A)	10/1000us max clamp voltage V _c @ I _{pp} (V)
P6SMAL5.0A	SMAL	10	6.4	7	5	400	65.3	9.2
P6SMAL6.0A	SMAL	10	6.67	7.37	6	400	58.3	10.3
P6SMAL6.5A	SMAL	10	7.22	7.98	6.5	250	53.6	11.2
P6SMAL7.0A	SMAL	10	7.78	8.6	7	100	50	12
P6SMAL8.0A	SMAL	1	8.89	9.83	8	50	44.2	13.6
P6SMAL9.0A	SMAL	1	10	11.1	9	10	39	15.4
P6SMAL10A	SMAL	1	11.1	12.3	10	5	35.3	17
P6SMAL11A	SMAL	1	12.2	13.5	11	1	33	18.2
P6SMAL12A	SMAL	1	13.3	14.7	12	1	30.2	19.9
P6SMAL13A	SMAL	1	14.4	15.9	13	1	28	21.5
P6SMAL14A	SMAL	1	15.6	17.2	14	1	25.9	23.2
P6SMAL15A	SMAL	1	16.7	18.5	15	1	24.6	24.4
P6SMAL16A	SMAL	1	17.8	19.7	16	1	23.1	26
P6SMAL17A	SMAL	1	18.9	20.9	17	1	21.8	27.6
P6SMAL18A	SMAL	1	20	22.1	18	1	20.6	29.2
P6SMAL20A	SMAL	1	22.2	24.5	20	1	18.6	32.4
P6SMAL22A	SMAL	1	24.4	26.9	22	1	16.9	35.5
P6SMAL24A	SMAL	1	26.7	29.5	24	1	15.5	38.9
P6SMAL26A	SMAL	1	28.9	31.9	26	1	14.3	42.1
P6SMAL28A	SMAL	1	31.1	34.4	28	1	13.3	45.4
P6SMAL30A	SMAL	1	33.3	36.8	30	1	12.4	48.4
P6SMAL33A	SMAL	1	36.7	40.6	33	1	11.3	53.3
P6SMAL36A	SMAL	1	40	44.2	36	1	10.4	58.1
P6SMAL40A	SMAL	1	44.4	49.1	40	1	9.3	64.5
P6SMAL43A	SMAL	1	47.8	52.8	43	1	8.7	69.4
P6SMAL45A	SMAL	1	50	55.3	45	1	8.3	72.7
P6SMAL48A	SMAL	1	53.3	58.9	48	1	7.8	77.4
P6SMAL51A	SMAL	1	56.7	62.7	51	1	7.3	82.4
P6SMAL54A	SMAL	1	60	66.3	54	1	6.9	87.1
P6SMAL58A	SMAL	1	64.4	71.2	58	1	6.5	93.6
P6SMAL60A	SMAL	1	66.7	73.7	60	1	6.2	96.8
P6SMAL64A	SMAL	1	71.1	78.6	64	1	5.9	103
P6SMAL70A	SMAL	1	77.8	86	70	1	5.3	113
P6SMAL75A	SMAL	1	83.3	92.1	75	1	5	121
P6SMAL78A	SMAL	1	86.7	95.8	78	1	4.8	126
P6SMAL85A	SMAL	1	94.4	104	85	1	4.4	137

600W TVS DIODES, P6SMBJ SERIES

	SPEC	Requirement
Product	P6SMBJxxx	
Package	SMB (J-lead)	HF + UL94V0+RoHS +Pb free plating
Power	600W	10/1000 pulse
Tj	-65C~150C	
Tstg	-65C ~150C	
ESD	30KV(Air) 30KV(contact)	IEC-61000-4-2
IFSM	100A	8.3ms single half sine wave
VF max	3.5V	50A, single die

Uni-direction	Bi-direction	I_T (mA)	V_{BR} (V) --min.	V_{BR} (V) --max.	V_R (V)	I_R (uA) --max.	10/1000us Max peak pulse currnt I_{pp} (A)	10/1000us max clamp voltage $V_c @ I_{pp}$ (V)
P6SMBJ5.0A	P6SMBJ5.0CA	10	6.45	6.98	5	400	65.3	9.2
P6SMBJ6.0A	P6SMBJ6.0CA	10	6.8	7.32	6	400	58.3	10.3
P6SMBJ6.5A	P6SMBJ6.5CA	10	7.27	7.92	6.5	250	53.6	11.2
P6SMBJ7.0A	P6SMBJ7.0CA	10	7.82	8.57	7	100	50	12
P6SMBJ8.0A	P6SMBJ8.0CA	1	8.95	9.76	8	50	44.2	13.6
P6SMBJ9.0A	P6SMBJ9.0CA	1	10.1	11	9	10	39	15.4
P6SMBJ10A	P6SMBJ10CA	1	11.21	12.19	10	5	35.3	17
P6SMBJ11A	P6SMBJ11CA	1	12.32	13.38	11	1	33	18.2
P6SMBJ12A	P6SMBJ12CA	1	13.43	14.57	12	1	30.2	19.9
P6SMBJ13A	P6SMBJ13CA	1	14.54	15.76	13	1	28	21.5
P6SMBJ14A	P6SMBJ14CA	1	15.75	17.04	14	1	25.9	23.2
P6SMBJ15A	P6SMBJ15CA	1	16.86	18.34	15	1	24.6	24.4
P6SMBJ16A	P6SMBJ16CA	1	17.97	19.52	16	1	23.1	26
P6SMBJ17A	P6SMBJ17CA	1	19.08	20.72	17	1	21.8	27.6
P6SMBJ18A	P6SMBJ18CA	1	20.19	21.9	18	1	20.6	29.2
P6SMBJ20A	P6SMBJ20CA	1	22.41	24.28	20	1	18.6	32.4
P6SMBJ22A	P6SMBJ22CA	1	24.63	26.66	22	1	16.9	35.5
P6SMBJ24A	P6SMBJ24CA	1	26.95	29.23	24	1	15.5	38.9
P6SMBJ26A	P6SMBJ26CA	1	29.12	31.67	26	1	14.3	42.1
P6SMBJ28A	P6SMBJ28CA	1	31.33	34.16	28	1	13.3	45.4
P6SMBJ30A	P6SMBJ30CA	1	33.55	36.54	30	1	12.4	48.4
P6SMBJ33A	P6SMBJ33CA	1	36.98	40.3	33	1	11.3	53.3
P6SMBJ36A	P6SMBJ36CA	1	40.3	43.9	36	1	10.4	58.1
P6SMBJ40A	P6SMBJ40CA	1	44.7	48.8	40	1	9.3	64.5
P6SMBJ43A	P6SMBJ43CA	1	48.2	52.4	43	1	8.7	69.4
P6SMBJ45A	P6SMBJ45CA	1	50.4	54.9	45	1	8.3	72.7
P6SMBJ48A	P6SMBJ48CA	1	53.7	58.5	48	1	7.8	77.4
P6SMBJ51A	P6SMBJ51CA	1	57.1	62.3	51	1	7.3	82.4
P6SMBJ54A	P6SMBJ54CA	1	60.5	65.8	54	1	6.9	87.1
P6SMBJ58A	P6SMBJ58CA	1	64.9	70.7	58	1	6.5	93.6
P6SMBJ60A	P6SMBJ60CA	1	67.2	73.2	60	1	6.2	96.8
P6SMBJ64A	P6SMBJ64CA	1	71.6	78	64	1	5.9	103
P6SMBJ70A	P6SMBJ70CA	1	78.4	85.4	70	1	5.3	113
P6SMBJ75A	P6SMBJ75CA	1	83.9	91.5	75	1	5	121
P6SMBJ78A	P6SMBJ78CA	1	87.4	95.1	78	1	4.8	126
P6SMBJ85A	P6SMBJ85CA	1	95.1	103.3	85	1	4.4	137
P6SMBJ90A	P6SMBJ90CA	1	100	111	90	1	4.1	146
P6SMBJ100A	P6SMBJ100CA	1	111	123	100	1	3.7	162
P6SMBJ110A	P6SMBJ110CA	1	122	135	110	1	3.4	177
P6SMBJ120A	P6SMBJ120CA	1	133	147	120	1	3.1	193
P6SMBJ130A	P6SMBJ130CA	1	144	159	130	1	2.9	209
P6SMBJ150A	P6SMBJ150CA	1	167	185	150	1	2.5	243
P6SMBJ160A	P6SMBJ160CA	1	178	197	160	1	2.3	259
P6SMBJ170A	P6SMBJ170CA	1	189	209	170	1	2.2	275
P6SMBJ180A	P6SMBJ180CA	1	201	222	180	1	2.1	292
P6SMBJ190A	P6SMBJ190CA	1	209	231	190	1	2	304
P6SMBJ200A	P6SMBJ200CA	1	224	247	200	1	1.9	324
P6SMBJ220A	P6SMBJ220CA	1	246	272	220	1	1.7	356

600W TVS DIODES, SMBJ SERIES



	SPEC	Requirement
Package	SMB (J-lead)	HF + UL94V0+RoHS +Pb free plating
Power	600W	10/1000 pulse
Tj	-65C~150C	
Tstg	150C	
ESD	30KV(Air) 30KV(contact)	IEC-61000-4-2

Uni-direction	Bi-direction	Package	I _T (mA)	V _{BR} (V) --min.	V _{BR} (V) --max.	V _R (V)	I _R (uA) --max.	10/1000us Max peak pulse currnt I _{pp} (A)	10/1000us max clamp voltage V _c @ I _{pp} (V)
SMBJ5.0A	SMBJ5.0CA	SMB	10	6.45	6.98	5	400	65.3	9.2
SMBJ6.0A	SMBJ6.0CA	SMB	10	6.8	7.32	6	400	58.3	10.3
SMBJ6.5A	SMBJ6.5CA	SMB	10	7.27	7.92	6.5	250	53.6	11.2
SMBJ7.0A	SMBJ7.0CA	SMB	10	7.82	8.57	7	100	50	12
SMBJ8.0A	SMBJ8.0CA	SMB	1	8.95	9.76	8	50	44.2	13.6
SMBJ9.0A	SMBJ9.0CA	SMB	1	10.1	11	9	10	39	15.4
SMBJ10A	SMBJ10CA	SMB	1	11.21	12.19	10	5	35.3	17
SMBJ11A	SMBJ11CA	SMB	1	12.32	13.38	11	1	33	18.2
SMBJ12A	SMBJ12CA	SMB	1	13.43	14.57	12	1	30.2	19.9
SMBJ13A	SMBJ13CA	SMB	1	14.54	15.76	13	1	28	21.5
SMBJ14A	SMBJ14CA	SMB	1	15.75	17.04	14	1	25.9	23.2
SMBJ15A	SMBJ15CA	SMB	1	16.86	18.34	15	1	24.6	24.4
SMBJ16A	SMBJ16CA	SMB	1	17.97	19.52	16	1	23.1	26
SMBJ17A	SMBJ17CA	SMB	1	19.08	20.72	17	1	21.8	27.6
SMBJ18A	SMBJ18CA	SMB	1	20.19	21.9	18	1	20.6	29.2
SMBJ20A	SMBJ20CA	SMB	1	22.41	24.28	20	1	18.6	32.4
SMBJ22A	SMBJ22CA	SMB	1	24.63	26.66	22	1	16.9	35.5
SMBJ24A	SMBJ24CA	SMB	1	26.95	29.23	24	1	15.5	38.9
SMBJ26A	SMBJ26CA	SMB	1	29.12	31.67	26	1	14.3	42.1
SMBJ28A	SMBJ28CA	SMB	1	31.33	34.16	28	1	13.3	45.4
SMBJ30A	SMBJ30CA	SMB	1	33.55	36.54	30	1	12.4	48.4
SMBJ33A	SMBJ33CA	SMB	1	36.98	40.3	33	1	11.3	53.3
SMBJ36A	SMBJ36CA	SMB	1	40.3	43.9	36	1	10.4	58.1
SMBJ40A	SMBJ40CA	SMB	1	44.7	48.8	40	1	9.3	64.5
SMBJ43A	SMBJ43CA	SMB	1	48.2	52.4	43	1	8.7	69.4
SMBJ45A	SMBJ45CA	SMB	1	50.4	54.9	45	1	8.3	72.7
SMBJ48A	SMBJ48CA	SMB	1	53.7	58.5	48	1	7.8	77.4
SMBJ51A	SMBJ51CA	SMB	1	57.1	62.3	51	1	7.3	82.4
SMBJ54A	SMBJ54CA	SMB	1	60.5	65.8	54	1	6.9	87.1
SMBJ58A	SMBJ58CA	SMB	1	64.9	70.7	58	1	6.5	93.6
SMBJ60A	SMBJ60CA	SMB	1	67.2	73.2	60	1	6.2	96.8
SMBJ64A	SMBJ64CA	SMB	1	71.6	78	64	1	5.9	103
SMBJ70A	SMBJ70CA	SMB	1	78.4	85.4	70	1	5.3	113
SMBJ75A	SMBJ75CA	SMB	1	83.9	91.5	75	1	5	121
SMBJ78A	SMBJ78CA	SMB	1	87.4	95.1	78	1	4.8	126
SMBJ85A	SMBJ85CA	SMB	1	95.1	103.3	85	1	4.4	137

1000W TVS DIODES, P1KSMBJ SERIES

	SPEC	Requirement
Package	SMB (J-lead)	HF + UL94V0+RoHS +Pb free plating
Power	1000W	10/1000 pulse
Tj	-65C~150C	
Tstg	175C	
ESD	30KV(Air) 30KV(contact)	IEC-61000-4-2
IFSM	120A	8.3ms single half sine wave
VF max	3.5V	50A, single die

Uni-direction	Bi-direction	I_T (mA)	V_{BR} (V) --min.	V_{BR} (V) --max.	V_R (V)	I_R (uA) --max.	10/1000us Max peak pulse currrnt I_{pp} (A)	10/1000us max clamp voltage $V_c @ I_{pp}$ (V)
P1KSMBJ6.8A	P1KSMBJ6.8CA	10	6.45	7.14	5.8	900	95.2	10.5
P1KSMBJ7.5A	P1KSMBJ7.5CA	10	7.13	7.88	6.4	400	88.5	11.3
P1KSMBJ8.2A	P1KSMBJ8.2CA	10	7.79	8.61	7.02	180	82.6	12.1
P1KSMBJ9.1A	P1KSMBJ9.1CA	1	8.65	9.55	7.78	45	74.6	13.4
P1KSMBJ10A	P1KSMBJ10CA	1	9.5	10.5	8.55	8	69	14.5
P1KSMBJ11A	P1KSMBJ11CA	1	10.5	11.6	9.4	4	64.1	15.6
P1KSMBJ12A	P1KSMBJ12CA	1	11.4	12.6	10.2	1	59.9	16.7
P1KSMBJ13A	P1KSMBJ13CA	1	12.4	13.7	11.1	1	54.9	18.2
P1KSMBJ15A	P1KSMBJ15CA	1	14.3	15.8	12.8	1	47.2	21.2
P1KSMBJ16A	P1KSMBJ16CA	1	15.2	16.8	13.6	1	44.4	22.5
P1KSMBJ18A	P1KSMBJ18CA	1	17.1	18.9	15.3	1	39.2	25.5
P1KSMBJ20A	P1KSMBJ20CA	1	19	21	17.1	1	36.1	27.7
P1KSMBJ22A	P1KSMBJ22CA	1	20.9	23.1	18.8	1	32.7	30.6
P1KSMBJ24A	P1KSMBJ24CA	1	22.8	25.2	20.5	1	30.1	33.2
P1KSMBJ27A	P1KSMBJ27CA	1	25.7	28.4	23.1	1	26.7	37.5
P1KSMBJ30A	P1KSMBJ30CA	1	28.5	31.5	25.6	1	24.2	41.4
P1KSMBJ33A	P1KSMBJ33CA	1	31.4	34.7	28.2	1	21.9	45.7
P1KSMBJ36A	P1KSMBJ36CA	1	34.2	37.8	30.8	1	20	49.9
P1KSMBJ39A	P1KSMBJ39CA	1	37.1	41	33.3	1	18.6	53.9
P1KSMBJ43A	P1KSMBJ43CA	1	40.9	45.2	36.8	1	16.9	59.3
P1KSMBJ47A	P1KSMBJ47CA	1	44.7	49.4	40.2	1	15.4	64.8
P1KSMBJ51A	P1KSMBJ51CA	1	48.5	53.6	43.6	1	14.3	70.1
P1KSMBJ56A	P1KSMBJ56CA	1	53.2	58.8	47.8	1	13	77
P1KSMBJ62A	P1KSMBJ62CA	1	58.9	65.1	53	1	11.8	85
P1KSMBJ68A	P1KSMBJ68CA	1	64.6	71.4	58.1	1	10.9	92
P1KSMBJ75A	P1KSMBJ75CA	1	71.3	78.8	64.1	1	9.7	103
P1KSMBJ82A	P1KSMBJ82CA	1	77.9	86.1	70.1	1	8.8	113
P1KSMBJ91A	P1KSMBJ91CA	1	86.5	95.5	77.8	1	8	125
P1KSMBJ100A	P1KSMBJ100CA	1	95	105	85.5	1	7.3	137

1500W TVS DIODES, SMCJ SERIES



	SPEC	Requirement
Package	SMC	HF + UL94V0+RoHS +Pb free plating
Power	1500W	10/1000 pulse
Tj	-65C~150C	
Tstg	175C	
ESD	30KV(Air) 30KV(contact)	IEC-61000-4-2

Uni-direction	Bi-direction	Package	I _T (mA)	V _{BR} (V) --min.	V _{BR} (V) --max.	V _R (V)	I _R (uA) --max.	10/1000us Max peak pulse currnt I _{pp} (A)	10/1000us max clamp voltage V _c @ I _{pp} (V)
SMCJ5.0A	SMCJ5.0CA	SMC	10	6.45	6.98	5	400	163	9.2
SMCJ6.0A	SMCJ6.0CA	SMC	10	6.8	7.32	6	400	145.7	10.3
SMCJ6.5A	SMCJ6.5CA	SMC	10	7.27	7.92	6.5	250	134	11.2
SMCJ7.0A	SMCJ7.0CA	SMC	10	7.82	8.57	7	200	125	12
SMCJ8.0A	SMCJ8.0CA	SMC	1	8.95	9.76	8	100	110.3	13.6
SMCJ9.0A	SMCJ9.0CA	SMC	1	10.1	11	9	10	97.4	15.4
SMCJ10A	SMCJ10CA	SMC	1	11.21	12.19	10	5	88.3	17
SMCJ11A	SMCJ11CA	SMC	1	12.32	13.38	11	1	82.5	18.2
SMCJ12A	SMCJ12CA	SMC	1	13.43	14.57	12	1	75.4	19.9
SMCJ13A	SMCJ13CA	SMC	1	14.54	15.76	13	1	69.8	21.5
SMCJ14A	SMCJ14CA	SMC	1	15.75	17.04	14	1	64.7	23.2
SMCJ15A	SMCJ15CA	SMC	1	16.86	18.33	15	1	61.5	24.4
SMCJ16A	SMCJ16CA	SMC	1	17.93	19.56	16	1	57.7	26
SMCJ17A	SMCJ17CA	SMC	1	19.05	20.76	17	1	54.4	27.6
SMCJ18A	SMCJ18CA	SMC	1	20.19	21.9	18	1	51.4	29.2
SMCJ20A	SMCJ20CA	SMC	1	22.41	24.28	20	1	46.3	32.4
SMCJ22A	SMCJ22CA	SMC	1	24.63	26.66	22	1	42.3	35.5
SMCJ24A	SMCJ24CA	SMC	1	26.95	29.23	24	1	38.6	38.9
SMCJ26A	SMCJ26CA	SMC	1	29.12	31.67	26	1	35.7	42.1
SMCJ28A	SMCJ28CA	SMC	1	31.33	34.16	28	1	33.1	45.4
SMCJ30A	SMCJ30CA	SMC	1	33.55	36.54	30	1	31	48.4
SMCJ33A	SMCJ33CA	SMC	1	36.98	40.3	33	1	28.2	53.3
SMCJ36A	SMCJ36CA	SMC	1	40.3	43.9	36	1	25.9	58.1
SMCJ40A	SMCJ40CA	SMC	1	44.7	48.8	40	1	23.3	64.5
SMCJ43A	SMCJ43CA	SMC	1	48.2	52.4	43	1	21.7	69.4
SMCJ45A	SMCJ45CA	SMC	1	50.4	54.9	45	1	20.6	72.7
SMCJ48A	SMCJ48CA	SMC	1	53.8	58.4	48	1	19.4	77.4
SMCJ51A	SMCJ51CA	SMC	1	57.2	62.1	51	1	18.2	82.4
SMCJ54A	SMCJ54CA	SMC	1	60.5	65.7	54	1	17.3	87.1
SMCJ58A	SMCJ58CA	SMC	1	65	70.6	58	1	16.1	93.6
SMCJ60A	SMCJ60CA	SMC	1	67.3	73	60	1	15.5	96.8
SMCJ64A	SMCJ64CA	SMC	1	71.6	78	64	1	14.6	103
SMCJ70A	SMCJ70CA	SMC	1	78.5	85.2	70	1	13.3	113
SMCJ75A	SMCJ75CA	SMC	1	83.9	91.5	75	1	12.4	121
SMCJ78A	SMCJ78CA	SMC	1	87.4	95.1	78	1	11.9	126
SMCJ85A	SMCJ85CA	SMC	1	95.1	103.2	85	1	11	137
SMCJ90A	SMCJ90CA	SMC	1	100	111	90	1	10.3	146
SMCJ100A	SMCJ100CA	SMC	1	111	123	100	1	9.3	162
SMCJ110A	SMCJ110CA	SMC	1	122	135	110	1	8.5	177
SMCJ120A	SMCJ120CA	SMC	1	133	147	120	1	7.8	193
SMCJ130A	SMCJ130CA	SMC	1	144	159	130	1	7.2	209
SMCJ150A	SMCJ150CA	SMC	1	167	185	150	1	6.2	243
SMCJ160A	SMCJ160CA	SMC	1	178	197	160	1	5.8	259
SMCJ170A	SMCJ170CA	SMC	1	189	209	170	1	5.5	275
SMCJ180A	SMCJ180CA	SMC	1	201	222	180	1	5.2	292
SMCJ190A	SMCJ190CA	SMC	1	209	231	190	1	4.9	307
SMCJ200A	SMCJ200CA	SMC	1	224	247	200	1	4.7	324
SMCJ220A	SMCJ220CA	SMC	1	246	272	220	1	4.2	356

3000W TVS DIODES, SMDJ SERIES



	SPEC	Requirement
Package	SMC(J lead)	HF + UL94V0+RoHS +Pb free plating
Power	3000W	10/1000 pulse
Tj	-65C~150C	
Tstg	150C	
ESD	30KV(Air) 30KV(contact)	IEC-61000-4-2

Uni-direction	Bi-direction	Package	I _T (mA)	V _{BR} (V) --min.	V _{BR} (V) --max.	V _R (V)	I _R (uA) --max.	10/1000us Max peak pulse currnt I _{pp} (A)	10/1000us max clamp voltage V _c @ I _{pp} (V)
SMDJ9.0A	SMDJ9.0CA	SMC	1	10.1	11	9	10	194.8	15.4
SMDJ10A	SMDJ10CA	SMC	1	11.21	12.19	10	3.5	176.5	17
SMDJ11A	SMDJ11CA	SMC	1	12.32	13.33	11	2	164.8	18.2
SMDJ12A	SMDJ12CA	SMC	1	13.48	14.57	12	2	150.8	19.9
SMDJ13A	SMDJ13CA	SMC	1	14.54	15.76	13	2	139.5	21.5
SMDJ14A	SMDJ14CA	SMC	1	15.75	17.04	14	2	129.3	23.2
SMDJ15A	SMDJ15CA	SMC	1	16.86	18.33	15	2	123	24.4
SMDJ16A	SMDJ16CA	SMC	1	17.94	19.56	16	2	115.4	26
SMDJ17A	SMDJ17CA	SMC	1	19.04	20.75	17	2	108.7	27.6
SMDJ18A	SMDJ18CA	SMC	1	20.19	21.9	18	2	102.7	29.2
SMDJ20A	SMDJ20CA	SMC	1	22.41	24.28	20	2	92.6	32.4
SMDJ22A	SMDJ22CA	SMC	1	24.59	26.71	22	2	84.5	35.5
SMDJ24A	SMDJ24CA	SMC	1	26.9	29.18	24	2	77.1	38.9
SMDJ26A	SMDJ26CA	SMC	1	29.12	31.68	26	2	71.3	42.1
SMDJ28A	SMDJ28CA	SMC	1	31.34	34.16	28	2	66.1	45.4
SMDJ30A	SMDJ30CA	SMC	1	33.6	36.59	30	2	62	48.4
SMDJ33A	SMDJ33CA	SMC	1	36.98	40.3	33	2	56.3	53.3
SMDJ36A	SMDJ36CA	SMC	1	40.3	43.9	36	2	51.6	58.1
SMDJ40A	SMDJ40CA	SMC	1	44.8	48.8	40	2	46.5	64.5
SMDJ43A	SMDJ43CA	SMC	1	48.2	52.4	43	2	43.2	69.4
SMDJ45A	SMDJ45CA	SMC	1	50.4	54.9	45	2	41.3	72.7
SMDJ48A	SMDJ48CA	SMC	1	53.7	58.5	48	2	38.8	77.4
SMDJ51A	SMDJ51CA	SMC	1	57.1	62.3	51	2	36.4	82.4
SMDJ54A	SMDJ54CA	SMC	1	60.5	65.8	54	2	34.4	87.1
SMDJ58A	SMDJ58CA	SMC	1	64.9	70.7	58	2	32.1	93.6
SMDJ60A	SMDJ60CA	SMC	1	67.2	73.2	60	2	31	96.8
SMDJ64A	SMDJ64CA	SMC	1	71.6	78	64	2	29.1	103
SMDJ70A	SMDJ70CA	SMC	1	78.4	85.4	70	2	26.5	113
SMDJ75A	SMDJ75CA	SMC	1	83.9	91.5	75	2	24.8	121
SMDJ78A	SMDJ78CA	SMC	1	87.4	95.1	78	2	23.8	126
SMDJ85A	SMDJ85CA	SMC	1	95.2	103.3	85	2	21.9	137

5000W TVS DIODES, 5.0SMDJ SERIES

	SPEC	Requirement
Package	SMC(J lead)	HF + UL94V0+RoHS +Pb free plating
Power	5000W	10/1000 pulse
Tj	-65C~150C	
Tstg	175C	
ESD	30KV(Air) 30KV(contact)	IEC-61000-4-2
IFSM	300A	8.3ms single half sine wave
VF max	5V	single die @100A

Uni-direction	Bi-direction	I _T (mA)	V _{BR} (V) --min.	V _{BR} (V) --max.	V _R (V)	I _R (uA) --max.	10/1000us Max peak pulse currnt I _{pp} (A)	10/1000us max clamp voltage V _c @ I _{pp} (V)
5.0SMDJ12A	5.0SMDJ12CA	1	13.3	14.7	12	1	252	19.9
5.0SMDJ13A	5.0SMDJ13CA	1	14.4	15.9	13	1	233	21.5
5.0SMDJ14A	5.0SMDJ14CA	1	15.6	17.2	14	1	216	23.2
5.0SMDJ15A	5.0SMDJ15CA	1	16.7	18.5	15	1	205	24.4
5.0SMDJ16A	5.0SMDJ16CA	1	17.8	19.7	16	1	193	26
5.0SMDJ17A	5.0SMDJ17CA	1	18.9	20.9	17	1	181	27.6
5.0SMDJ18A	5.0SMDJ18CA	1	20	22.1	18	1	172	29.3
5.0SMDJ20A	5.0SMDJ20CA	1	22.2	24.5	20	1	155	32.4
5.0SMDJ22A	5.0SMDJ22CA	1	24.4	26.9	22	1	141	35.5
5.0SMDJ24A	5.0SMDJ24CA	1	26.7	29.5	24	1	129	38.9
5.0SMDJ26A	5.0SMDJ26CA	1	28.9	31.9	26	1	119	42.1
5.0SMDJ28A	5.0SMDJ28CA	1	31.1	34.4	28	1	110	45.4
5.0SMDJ30A	5.0SMDJ30CA	1	33.3	36.8	30	1	103	48.4
5.0SMDJ33A	5.0SMDJ33CA	1	36.7	40.6	33	1	93.9	53.3
5.0SMDJ36A	5.0SMDJ36CA	1	40	44.2	36	1	86.1	58.1
5.0SMDJ40A	5.0SMDJ40CA	1	44.4	49.1	40	1	77.6	64.5
5.0SMDJ43A	5.0SMDJ43CA	1	47.8	52.8	43	1	72.1	69.4
5.0SMDJ45A	5.0SMDJ45CA	1	50	55.3	45	1	68.8	72.7
5.0SMDJ48A	5.0SMDJ48CA	1	53.3	58.9	48	1	64.7	77.4
5.0SMDJ51A	5.0SMDJ51CA	1	56.7	62.7	51	1	60.7	82.4
5.0SMDJ54A	5.0SMDJ54CA	1	60	66.3	54	1	57.5	87.1
5.0SMDJ58A	5.0SMDJ58CA	1	64.4	71.2	58	1	53.5	93.6
5.0SMDJ60A	5.0SMDJ60CA	1	66.7	73.7	60	1	51.7	96.8
5.0SMDJ64A	5.0SMDJ64CA	1	71.1	78.6	64	1	48.6	103
5.0SMDJ70A	5.0SMDJ70CA	1	77.8	86	70	1	44.3	113
5.0SMDJ75A	5.0SMDJ75CA	1	83.3	92.1	75	1	41.4	121
5.0SMDJ78A	5.0SMDJ78CA	1	86.7	95.8	78	1	39.7	126
5.0SMDJ85A	5.0SMDJ85CA	1	94.4	104	85	1	36.5	137
5.0SMDJ90A	5.0SMDJ90CA	1	100	111	90	1	34.3	146
5.0SMDJ100A	5.0SMDJ100CA	1	111	123	100	1	30.9	162
5.0SMDJ110A	5.0SMDJ110CA	1	122	135	110	1	28.3	177
5.0SMDJ120A	5.0SMDJ120CA	1	133	147	120	1	26	193
5.0SMD130A	5.0SMD130CA	1	144	159	130	1	24	209
5.0SMDJ150A	5.0SMDJ150CA	1	167	185	150	1	20.6	243
5.0SMDJ160A	5.0SMDJ160CA	1	178	197	160	1	19.3	259
5.0SMDJ170A	5.0SMDJ170CA	1	189	209	170	1	18.2	275

6000W TVS DIODES, SM8S SERIES

	SPEC	Requirement
Package	SM8S(J lead)	HF + UL94V0+RoHS +Pb free plating
Power	6600W	10/1000 pulse
Tj	-65C~175C	
Tstg	175C	
ESD	30KV(Air) 30KV(contact)	IEC-61000-4-2
IFSM	700A	8.3ms single half sine wave
VF max		single die @100A

Uni-direction	Bi-direction	I_T (mA)	V_{BR} (V) --min.	V_{BR} (V) --max.	V_R (V)	I_R (uA) --max.	10/1000us Max peak pulse currnt I_{pp} (A)	10/1000us max clamp voltage $V_c @ I_{pp}$ (V)
SM8S10A	SM8S10CA	5	11.1	12.3	10	15	388	17
SM8S11A	SM8S11CA	5	12.2	13.5	11	10	363	18.2
SM8S12A	SM8S12CA	5	13.3	14.7	12	10	332	19.9
SM8S13A	SM8S13CA	5	14.4	15.9	13	10	307	21.5
SM8S14A	SM8S14CA	5	15.6	17.2	14	10	284	23.2
SM8S15A	SM8S15CA	5	16.7	18.5	15	10	270	24.4
SM8S16A	SM8S16CA	5	17.8	19.7	16	10	254	26
SM8S17A	SM8S17CA	5	18.9	20.9	17	10	239	27.6
SM8S18A	SM8S18CA	5	20	22.1	18	10	226	29.2
SM8S20A	SM8S20CA	5	22.2	24.5	20	10	204	32.4
SM8S22A	SM8S22CA	5	24.4	26.9	22	10	186	35.5
SM8S24A	SM8S24CA	5	26.7	29.5	24	10	170	38.9
SM8S26A	SM8S26CA	5	28.9	31.9	26	10	157	42.1
SM8S28A	SM8S28CA	5	31.1	34.4	28	10	145	45.4
SM8S30A	SM8S30CA	5	33.3	36.8	30	10	136	48.4
SM8S33A	SM8S33CA	5	36.7	40.6	33	10	124	53.3
SM8S36A	SM8S36CA	5	40	44.2	36	10	114	58.1
SM8S40A	SM8S40CA	5	44.4	49.1	40	10	102	64.5
SM8S43A	SM8S43CA	5	47.8	52.8	43	10	95.1	69.4


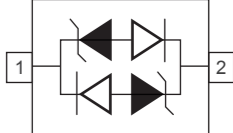

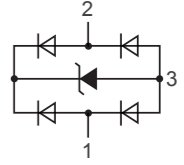
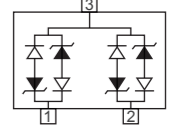
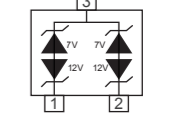
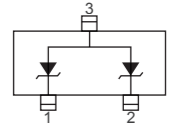
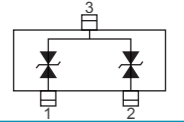

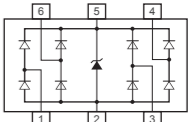



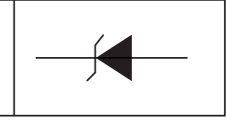

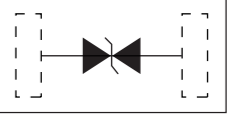
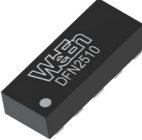
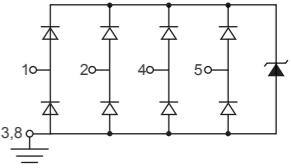


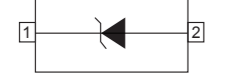


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**Electro-Static
Discharge Diodes**

Part No.	Package outline	V_{RWM} (V)	V_{BR} (Min)	$I_{PP}@8/20\mu s$ (A)	$V_{CL}@I_{PP}$ (V)	$I_{Rmax}@V_{RWM}$ (uA)	$C_{Jmax}@0V/1MHz$ (pF)	$P_{ppm}@8/20\mu s$ (W)	Diagram
SOD323 Package:									
ESDALD03BC		3.3	4.5	20	20	1	0.8	400	
ESDALD05BC		5	6.5	15	21	1	0.8	315	
ESDALD08BC		8	8.5	15	25	1	0.8	375	
ESDALD12BC		12	13.3	10	35	1	0.8	350	
ESDALD15BC		15	16.5	8	45	1	0.8	360	
ESDALD18BC		18	19.0	8	44	1	0.8	352	
ESDALD24BC		24	26.0	6	55	1	0.8	330	
ESDALD36BC		36	38.0	3	70	1	0.8	210	
SOT23-3 Package:									
ESDALD05UE2		5	6.0	4	15	0.1	0.8	60	
ESDALD05BE2		5	6.5	15	21	0.2	0.8	315	
ESDAHD712BE2		12/7	13.3/7.5	19	30	20	75	570	
ESDAHD03UE2		3	4	20	15	1	195	300	
ESDAHD05UE2		5	6	16	19	1	150	304	
ESDAHD12UE2		12	13.3	11	32	1	120	352	
ESDAHD24UE2		24	26	7	52	1	60	364	
ESDAHD05BE2		5	6.5	22	22	1	120	484	
ESDAHD12BE2		12	13.3	16	30	1	70	480	
ESDAHD24BE2		24	26	8	48	1	30	384	
SOT23-6 Package:									
ESDALD05UD4		5	6.0	5.5	16	0.1	1	88	

Part No.	Package outline	V_{RWM} (V)	V_{BR} (Min)	$I_{PP}@8/20\mu s$ (A)	$V_{CL}@I_{PP}$ (V)	$I_{Rmax}@V_{RWM}$ (uA)	$C_{Jmax}@0V/1_{MHz}$ (pF)	$P_{ppm}@8/20\mu s$ (W)	Diagram	
DFN1006 Package:										
ESDHD03UF		3.3	4.0	24	12	1	200	288		
ESDHD05UF		5	6.0	20	16	0.1	150 typ.	320		
ESDHD12UF		12	13.3	8	26	1	80	208		
ESDHD15UF		15	16.4	7	35	1	50	245		
ESDHD24UF		24	26.0	5	48	1	40	240		
ESDHD36UF		36	38.0	5	70	1	40	350		
ESDHD03BF			3.3	4.0	8	10	1	15	80	
ESDHD05BF			5	5.5	7	11	1	15	77	
ESDHD12BF			12	13.0	6	25	1	15	150	
ESDHD15BF			15	16.5	7	35	1	15	245	
ESDHD24BF			24	26.0	5	48	1	15	240	
ESDUD05BF			5	6.0	4	22	0.1	0.5	88	
ESDUDS03BF			3.3	3.6	5	10	1	0.4	50	
ESDUDS05BF			5	5.6	5	10	1	0.4	50	
DFN2510 Package:										
ESDALD05UG4		5	6.0	4	15	0.1	1	60		
ESDAUDS03UG4		3.3	3.6	4	8	1	0.58	32		
ESDAUDS05UG4		5	5.6	4	8	1	0.58	32		
SOD523 Package:										
ESDHD03UB		3.3	4.0	25	12	1	180	300		
ESDHD05UB		5	5.9	16	15	1	160	240		
ESDHD12UB		12	13.3	7	30	1	80	210		
ESDHD15UB		15	16.5	6	35	1	40	210		
ESDHD24UB		24	25.9	4	48	1	30	192		
ESDHD36UB		36	38.0	3	70	1	20	210		
ESDHD03BB		3.3	3.7	10	9	1	15	90		
ESDHD05BB		5	5.6	9	10	1	15	90		