



SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 40 to 200 V

Forward Current - 5.0 A

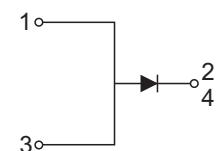
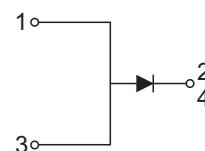
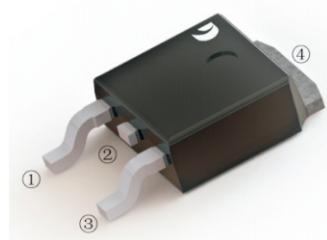
FEATURES

- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High temperature soldering guaranteed
- Mounting position: any

TO-251(I-PAK)



TO-252(D-PAK)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

CHARACTERISTICS	TO-251	MBR540VY	MBR545VY	MBR560VY	MBR5100VY	MBR5150VY	MBR5200VY	Units		
	TO-252	MBR540DY	MBR545DY	MBR560DY	MBR5100DY	MBR5150DY	MBR5200DY			
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	45	60	100	150	200	V		
Maximum RMS voltage	V_{RMS}	28	31.5	42	70	105	140	V		
Maximum DC Blocking Voltage	V_{DC}	40	45	60	100	150	200	V		
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5.0						A		
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	120						A		
Max Instantaneous Forward Voltage at 5 A	V_F	0.65		0.70	0.85	0.90	0.92	V		
Maximum DC Reverse Current $T_a = 25^\circ C$ at Rated DC Reverse Voltage $T_a = 125^\circ C$	I_R	0.1 20		0.05 20				mA		
Typical Junction Capacitance ⁽¹⁾	C_j	300		250				pF		
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	50						°C/W		
Operating Junction Temperature Range	T_j	-55 ~ +150				-55 ~ +175		°C		
Storage Temperature Range	T_{stg}	-55 ~ +150				-55 ~ +175		°C		

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 10cmX10cmX1mm copper pad areas.



Fig.1 Typical Forward Current Derating Curve

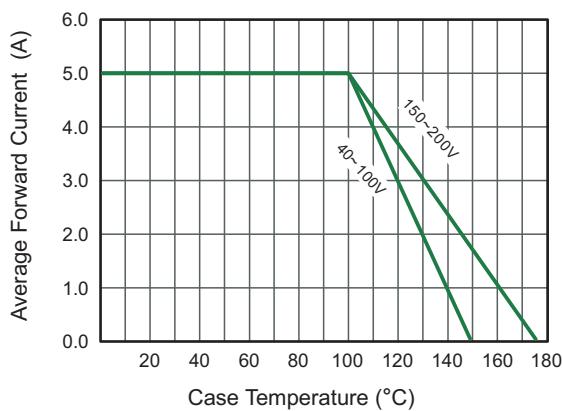


Fig.2 Typical Reverse Characteristics

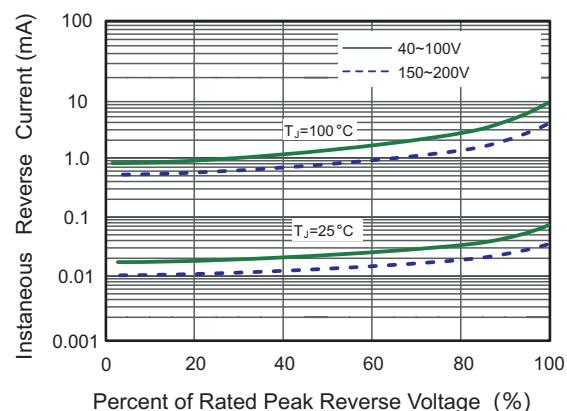


Fig.3 Typical Forward Characteristics

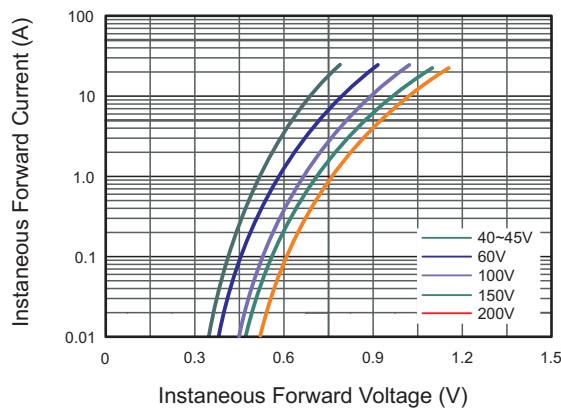


Fig.4 Typical Junction Capacitance

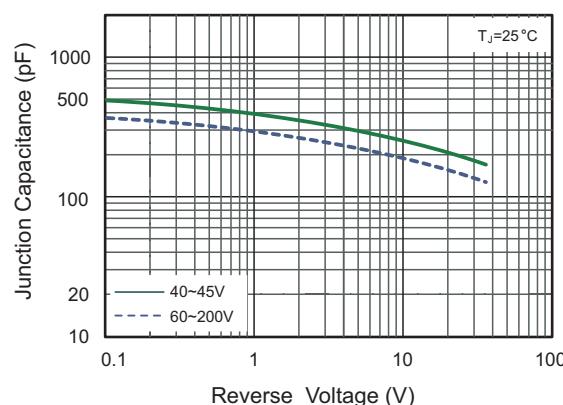
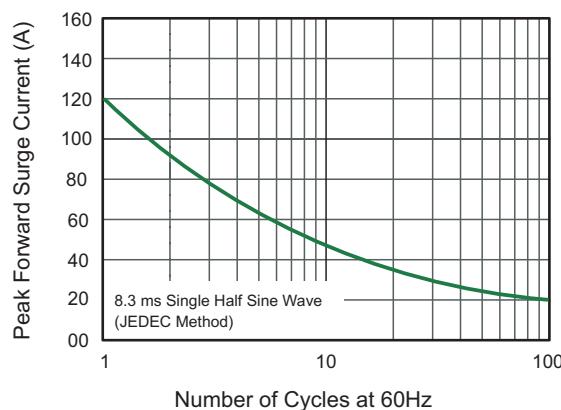
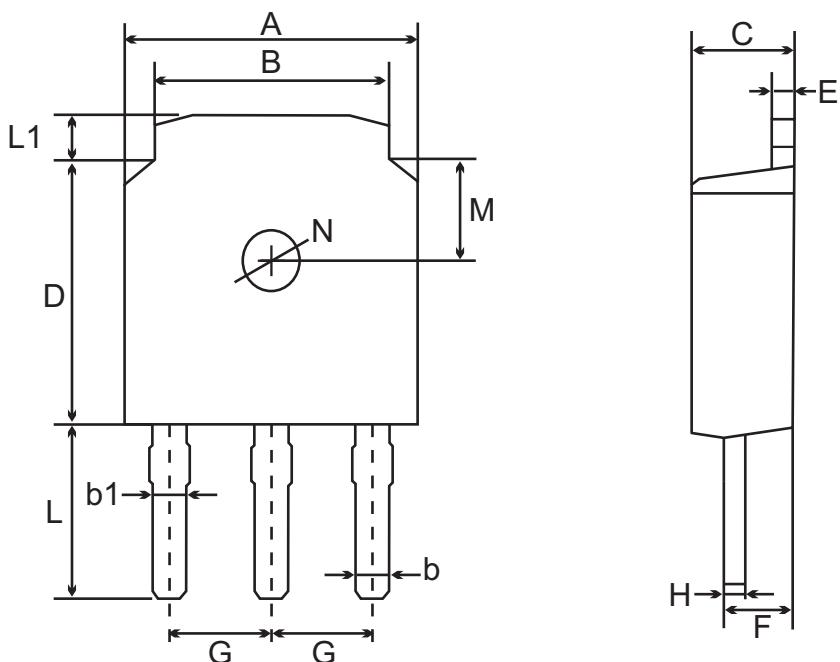


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current





TO-251(I-PAK) Package Outline Dimensions



TO-251(I-PAK) mechanical data

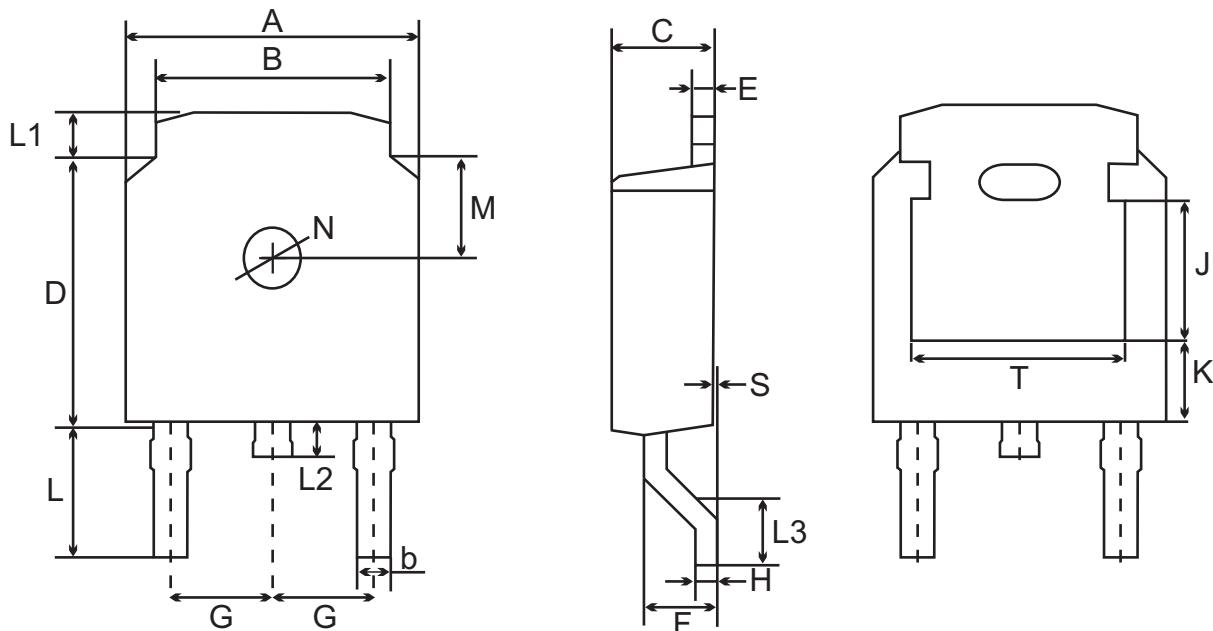
UNIT	A	B	b	b1	C	D	E	F	G	H	L	L1	M	N	
mm	max	6.7	5.5	0.86	0.9	2.5	6.3	0.6	1.8	2.29 TYPICAL	0.55	4.3	1.2	1.8 TYPICAL	1.3 TYPICAL
	min	6.3	5.1	0.66	0.76	2.1	5.9	0.4	1.3		0.45	3.9	0.8		
mil	max	264	217	33	35	98	248	24	71	90 TYPICAL	22	169	47	71 TYPICAL	51 TYPICAL
	min	248	201	26	30	83	232	16	51		18	154	31		

Marking

Type number	Marking code
MBR540VY	MBR540VY
MBR545VY	MBR545VY
MBR560VY	MBR560VY
MBR5100VY	MBR5100VY
MBR5150VY	MBR5150VY
MBR5200VY	MBR5200VY



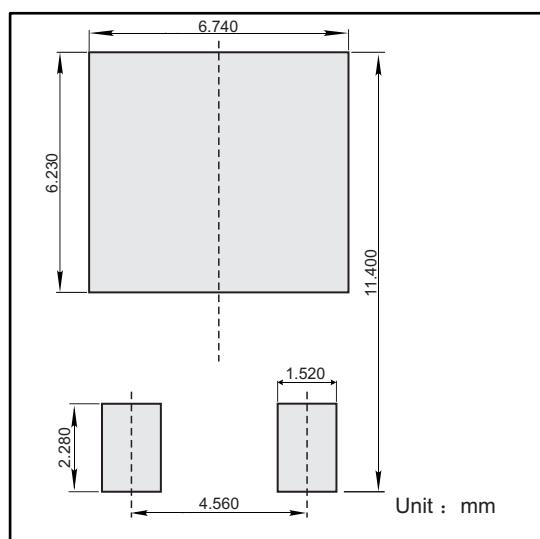
TO-252(D-PAK) Package Outline Dimensions



TO-252(D-PAK) mechanical data

UNIT	A	B	b	C	D	E	F	G	H	L	L1	L2	L3	S	M	N	J	K	T	
mm	max	6.7	5.5	0.86	2.5	6.3	0.6	1.8	2.29 TYPICAL	0.55	3.1	1.2	1.0	1.75	0.1	1.8 TYPICAL	1.3 TYPICAL	3.16 ref.	1.80 ref.	4.83 ref.
	min	6.3	5.1	0.66	2.1	5.9	0.4	1.3		0.45	2.7	0.8	0.6	1.40	0.0					
mil	max	264	217	33	98	248	24	71	90 TYPICAL	22	122	47	39	69	4	71 TYPICAL	51 TYPICAL	124 ref.	71 ref.	190 ref.
	min	248	201	26	83	232	16	51		18	106	31	24	55	0					

The recommended mounting pad size



Marking

Type number	Marking code
MBR540DY	MBR540DY
MBR545DY	MBR545DY
MBR560DY	MBR560DY
MBR5100DY	MBR5100DY
MBR5150DY	MBR5150DY
MBR5200DY	MBR5200DY



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