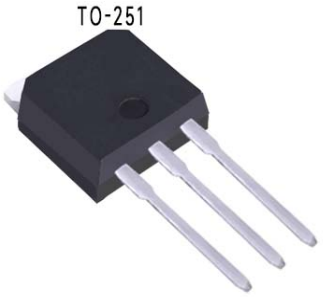
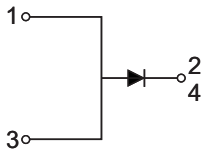
MBR1040xS THRU MBR10200xS

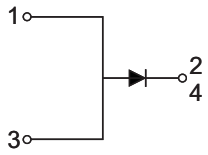
SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 40 to 200 V

Forward Current - 10 A







FEATURES

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified

CHARACTERISTICS	TO-251	MBR1040VS	MBR1045VS	MBR1060VS	MBR10100VS	MBR10150VS	MBR10200VS	Units
	TO-252	MBR1040DS	MBR1045DS	MBR1060DS	MBR10100DS	MBR10150DS	MBR10200DS	
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	$I_{F(AV)}$	10						A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150						A
Max Instantaneous Forward Voltage at 10 A	V_F	0.65		0.70	0.85	0.90	0.92	V
Maximum DC Reverse Current T_a = 25°C at Rated DC Reverse Voltage T_a =125°C	I_R	0.1 20			0.05 20			mA
Typical Junction Capacitance (1)	C_j	600		400				pF
Typical Thermal Resistance (2)	$R_{\theta JA}$	35						°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

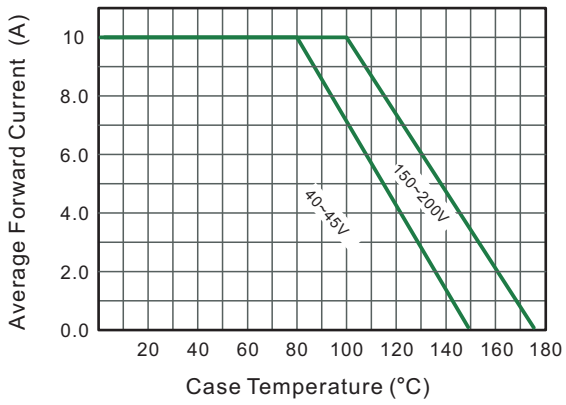


Fig.2 Typical Reverse Characteristics

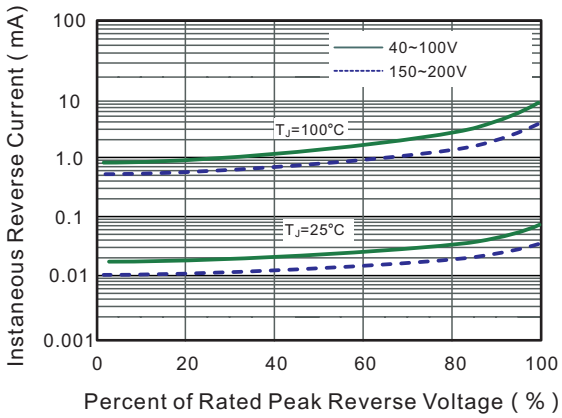


Fig.3 Typical Forward Characteristic

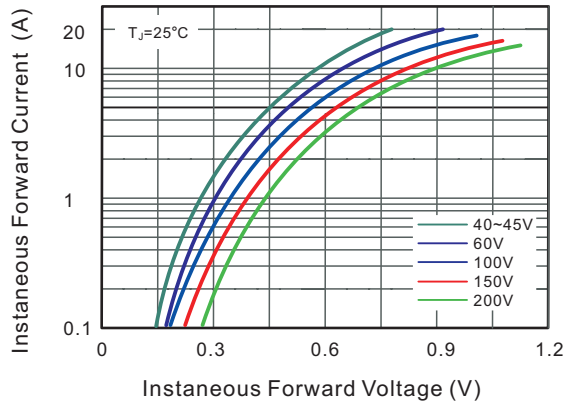


Fig.4 Typical Junction Capacitance

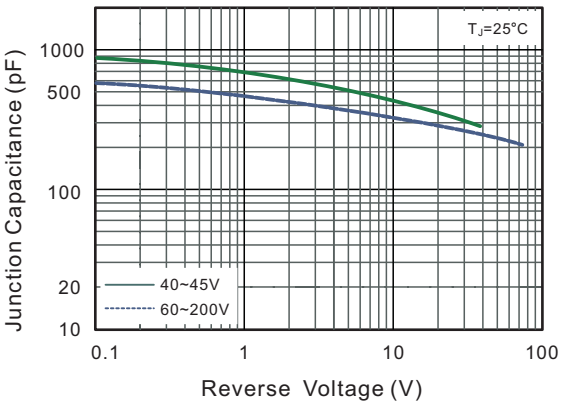


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

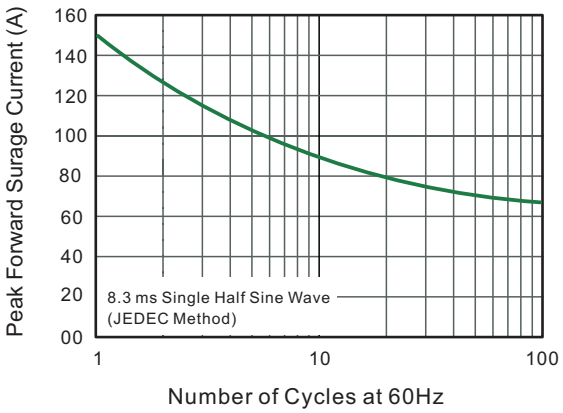
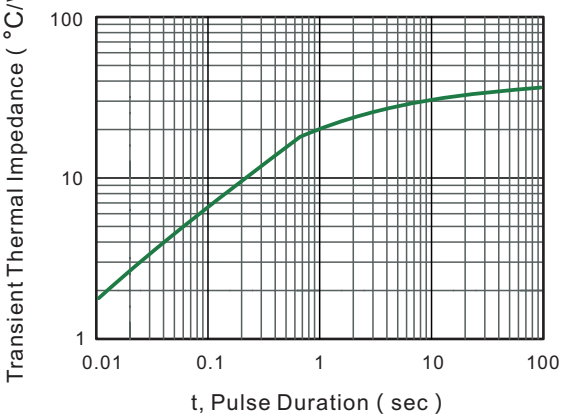
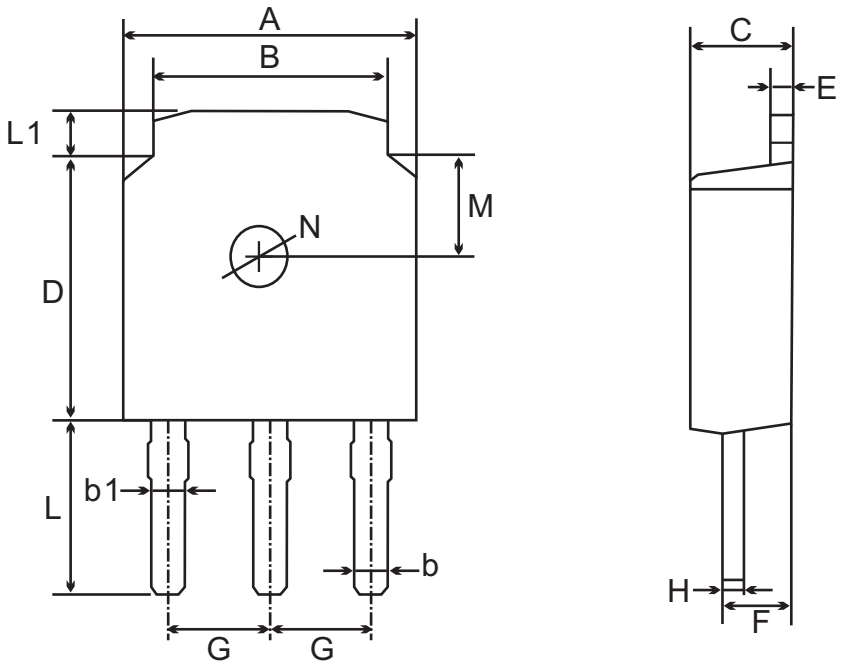


Fig.6- Typical Transient Thermal Impedance



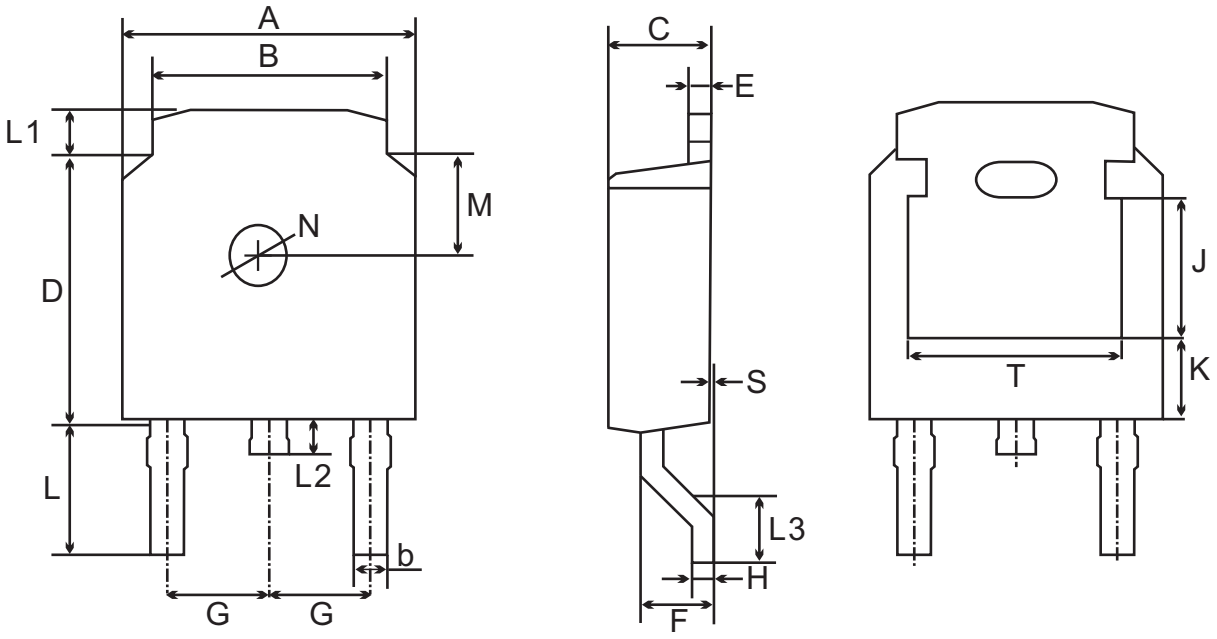
TO-251(D-PAK) Package Outline Dimensions



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	0.8	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	0.3	0.76	2.1	5.9	0.4	1.3		0.45	3.9	0.8		
mil	max	264	217	31	35	98	248	24	71	90 TYPICAL	22	169	47	71 TYPICAL	51 TYPICAL
	min	248	201	12	30	83	232	16	51		18	154	31		

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	0.8	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	0.3	2.1	5.9	0.4	1.3		0.45	2.7	0.8	0.6	1.40	0.0					
mil	max	264	217	31	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	12	83	232	16	51		18	106	31	24	55	0					