

## TO-252

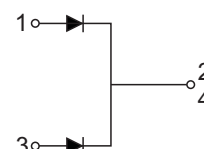
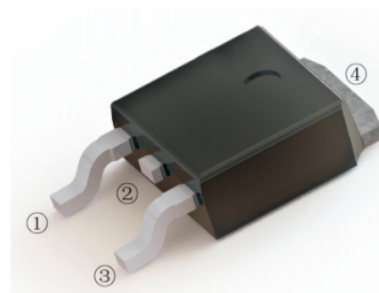
### SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 40 to 200 V

Forward Current - 20 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°C ambient temperature unless otherwise specified

CHARACTERISTICS	TO-252	MBR2040DT	MBR2045DT	MBR2060DT	MBR20100DT	MBR20150DT	MBR20200DT	Units
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	$I_{F(AV)}$	20						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 DC per leg	$V_F$	0.70		0.75	0.85	0.90	0.92	V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 125^\circ\text{C}$	$I_R$	0.1 20			0.05 20			mA
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	600		400				pF
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	45						°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

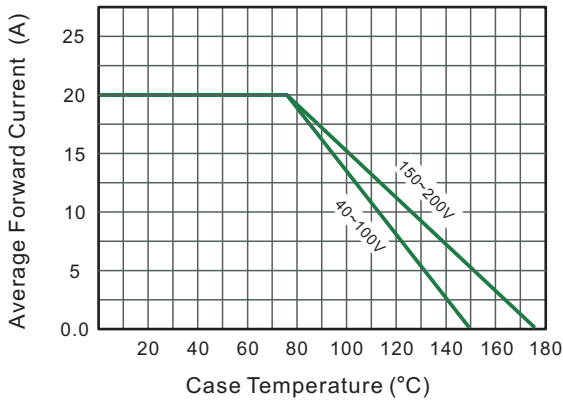


Fig.2 Typical Reverse Characteristics

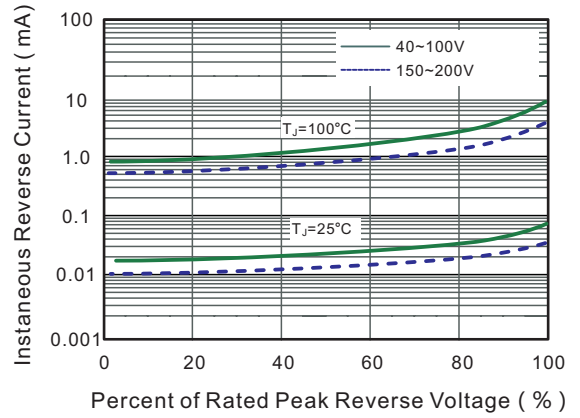


Fig.3 Typical Forward Characteristic

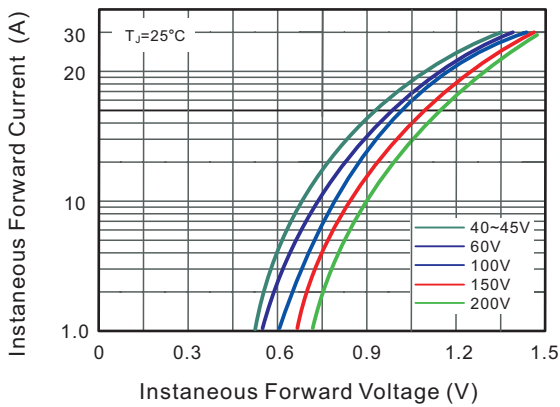


Fig.4 Typical Junction Capacitance

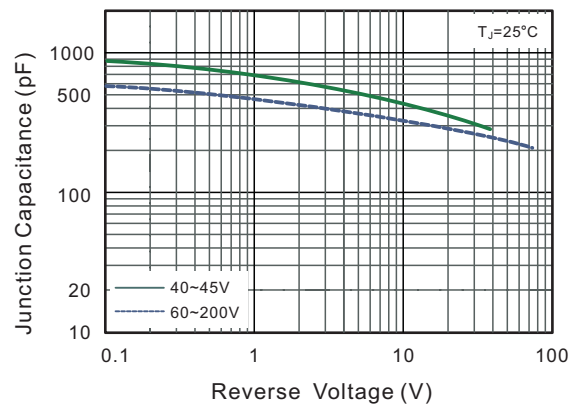


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

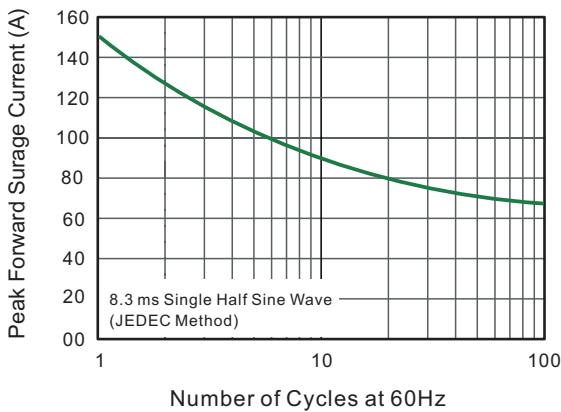
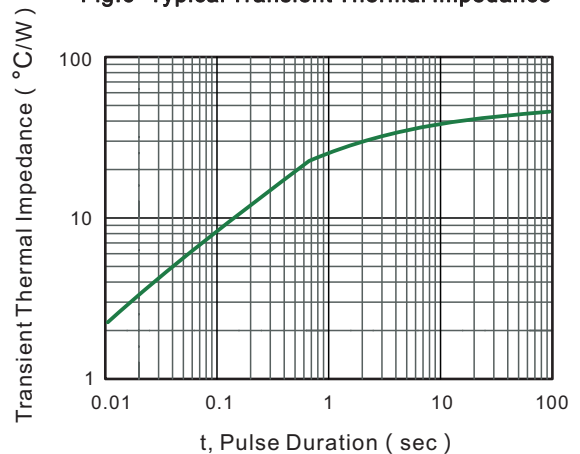
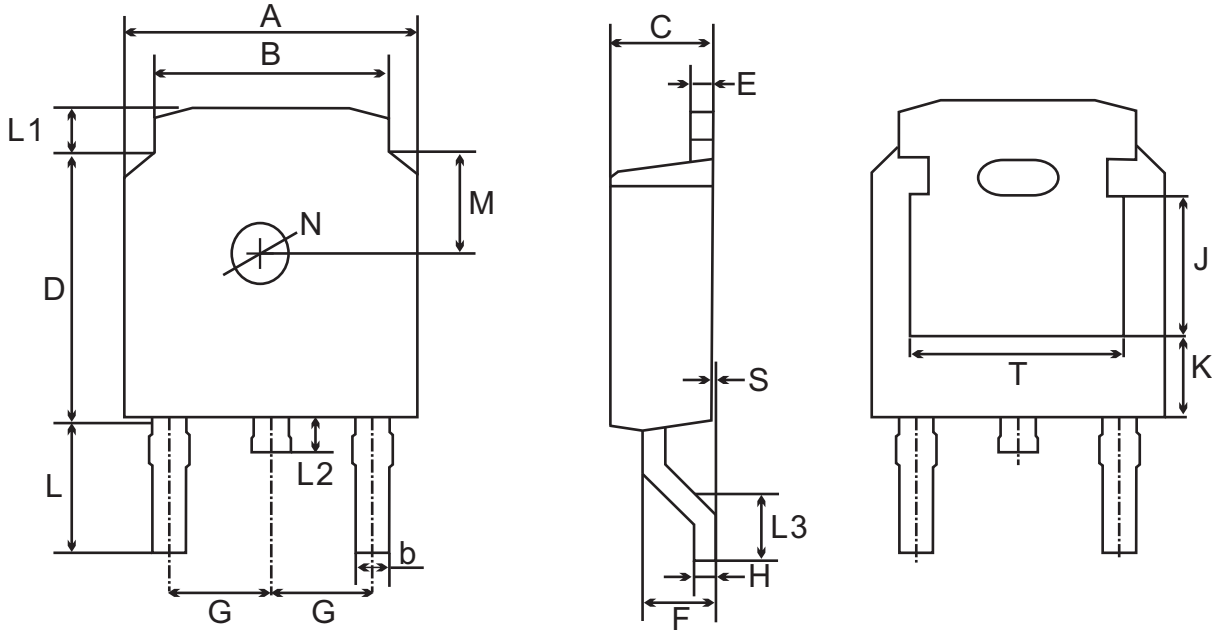


Fig.6- Typical Transient Thermal Impedance



TO-252 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	1.80	4.83
	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			ref.	ref.	ref.
mil	max	264	217	31	98	248	24	71	90 TYPICAL	22	122	47	39	69	4	71 TYPICAL	51 TYPICAL	124	71	190
	min	248	201	12	83	232	16	51		18	106	31	24	55	0			ref.	ref.	ref.