



SCHOTTKY BARRIER RECTIFIERS

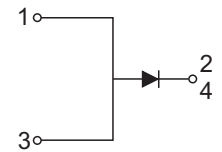
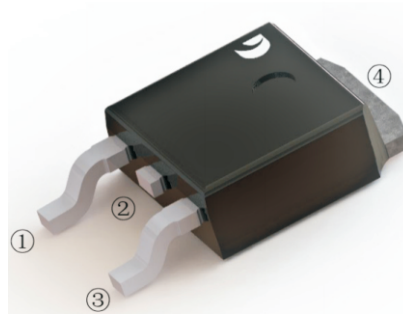
TO-252(D-PAK)

Reverse Voltage - 100 V

Forward Current - 20 A

FEATURES

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



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

PARAMETER	SYMBOL	MBRT20100DY	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	100	V
Maximum RMS voltage	$V_{RMS}$	70	V
Maximum DC Blocking Voltage	$V_{DC}$	100	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)	$I_{FSM}$	180	A
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	45	°C/W
Operating Junction Temperature Range	$T_j$	-55 ~ +150	°C
Storage Temperature Range	$T_{stg}$	-55 ~ +150	°C

(1) Mounted on infinite heat sink.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	Units
Breakdown voltage	$V_{BR}$	$I_R=0.5mA$	100	—	—	V
Instantaneous forward voltage	$V_F$	$I_F=2.0A$ $T_J=25^\circ C$	—	0.42	—	V
		$I_F=3.0A$ $T_J=25^\circ C$	—	0.47	—	
		$I_F=5.0A$ $T_J=25^\circ C$	—	0.55	—	
		$I_F=20A$ $T_J=25^\circ C$	—	0.65	0.70	
Reverse current	$I_R$	$V_R=70V, T_J=25^\circ C$	—	5	—	uA
		$V_R=100V, T_J=25^\circ C$ $T_J=100^\circ C$	— —	— 20	100 —	uA mA



Fig.1 Typical Forward Current Derating Curve

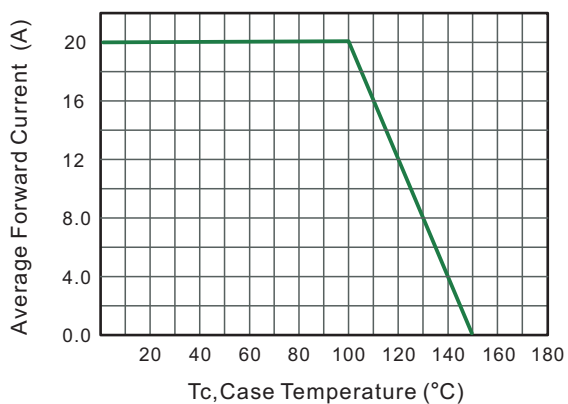


Fig.2 Typical Reverse Characteristics

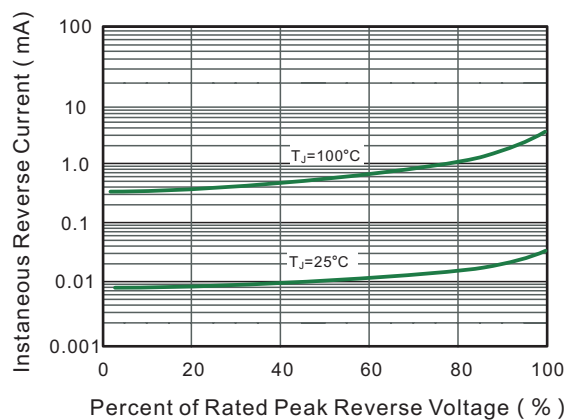


Fig.3 Typical Forward Characteristic

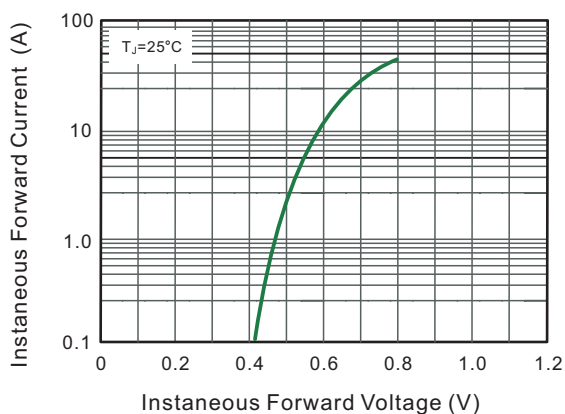


Fig.4 Typical Junction Capacitance

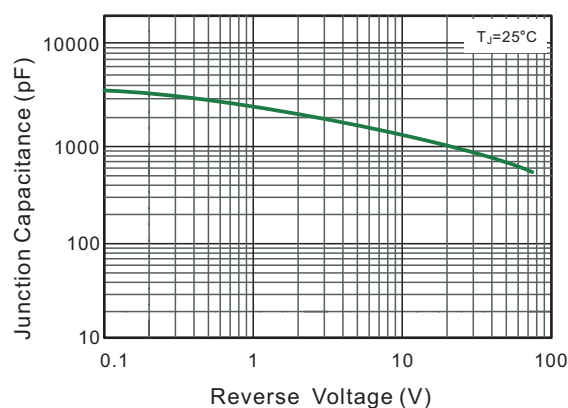


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

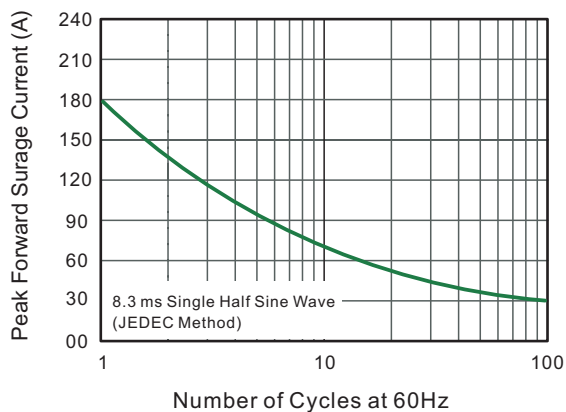
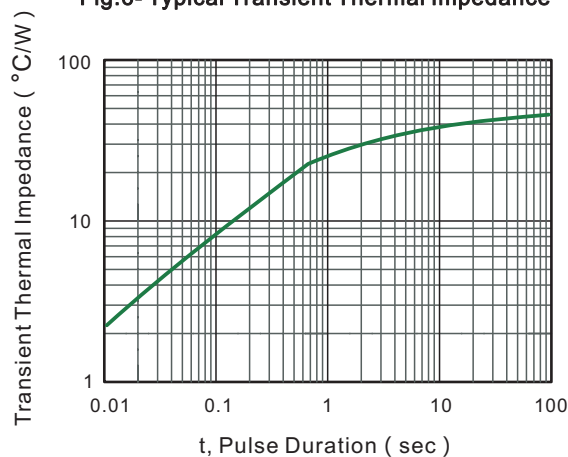
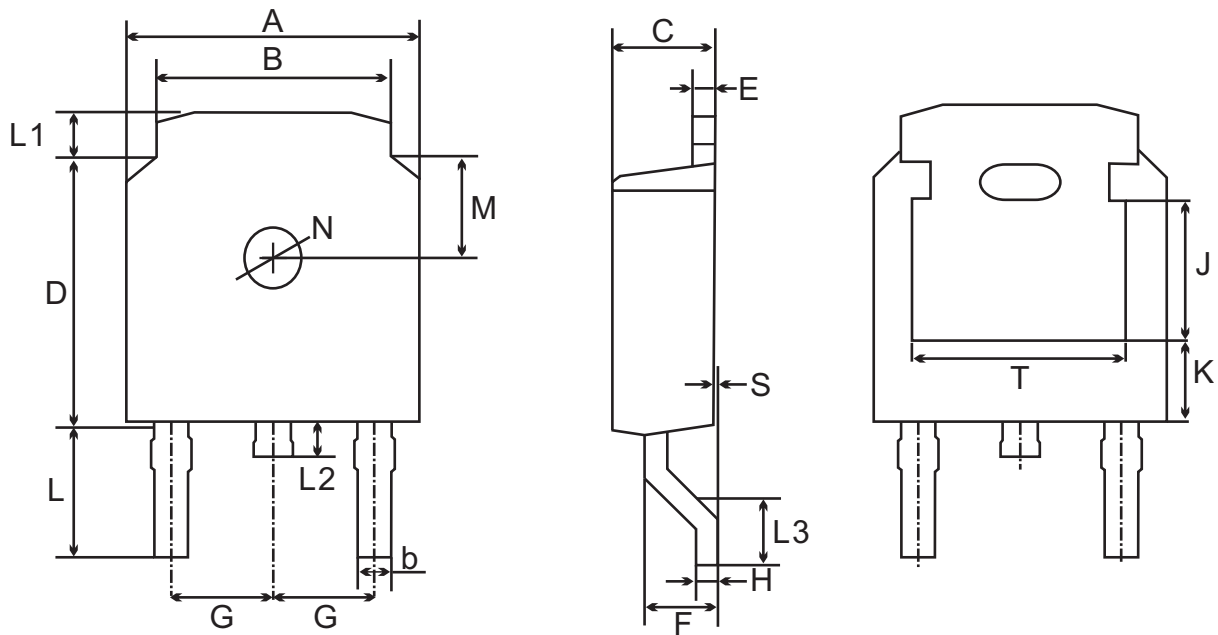


Fig.6- Typical Transient Thermal Impedance





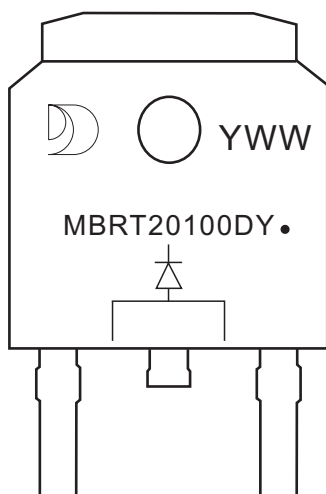
TO-252(D-PAK) Package Outline Dimensions



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					

**MARKING DIAGRAM**



YWW: Date Code  
Y:Years(0~9)  
WW:Week  
MBRT20100DY: Product name  
(NOTE: The weekly code is based on the actual number of weeks in the calendar year.)



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