



MBRD10100L

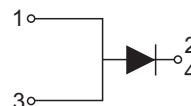
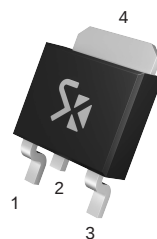
SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 100 V

Forward Current - 10 A

FEATURES

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



Top View

Simplified outline TO-252 and symbol

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

PARAMETER	SYMBOL	MBRD10100L	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	$I_{F(AV)}$	10	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150	A
Typical Junction Capacitance ⁽¹⁾	C_j	1050	pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	45	°C/W
Operating Junction Temperature Range	T_j	-55 ~ +150	°C
Storage Temperature Range	T_{stg}	-55 ~ +150	°C

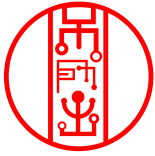
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) 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	$I_F = 2A$ $I_F = 5A$ $T_J = 25^\circ C$ $I_F = 10A$	- - -	0.43 0.49 0.60	- - 0.65	V
Reverse current	I_R	$V_R = 70V$	-	5	-	uA
		$V_R = 100V$ $T_J = 25^\circ C$ $T_J = 100^\circ C$	-	- 10	50 -	uA mA



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Fig.1 Typical Forward Current Derating Curve

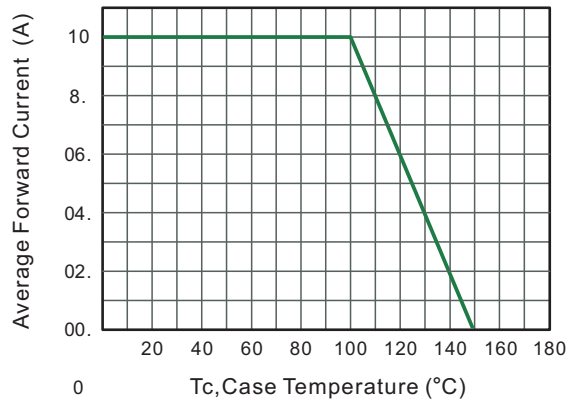


Fig.2 Typical Reverse Characteristics

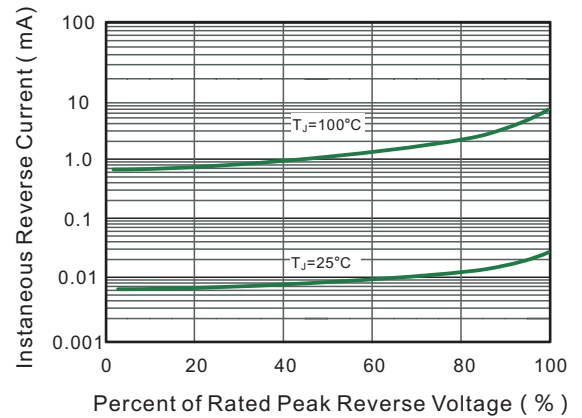


Fig.3 Typical Forward Characteristic

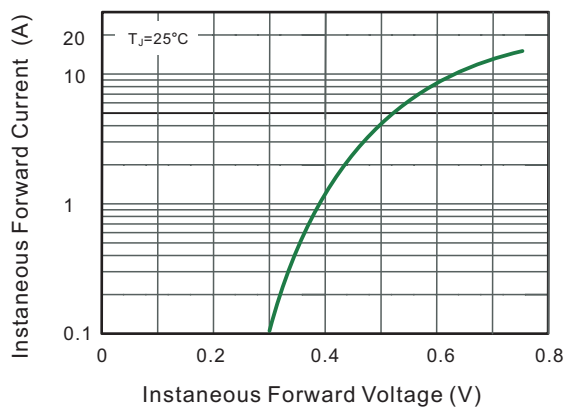


Fig.4 Typical Junction Capacitance

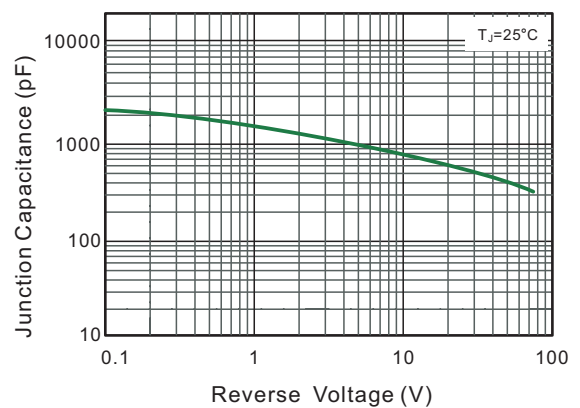


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

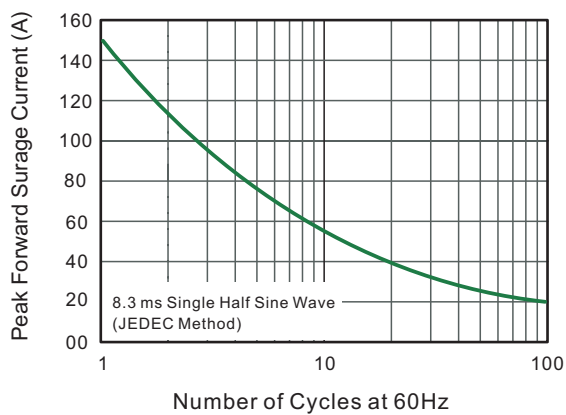
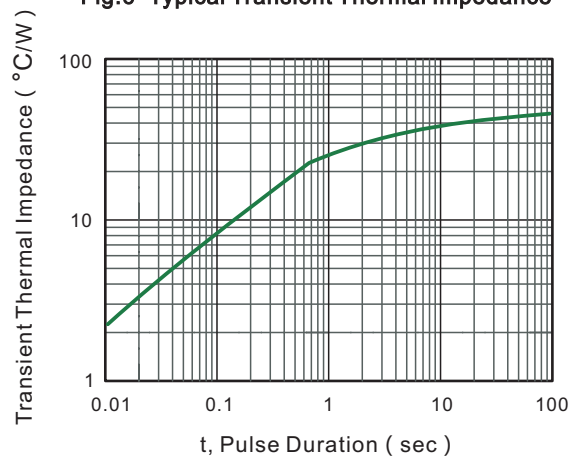


Fig.6- Typical Transient Thermal Impedance

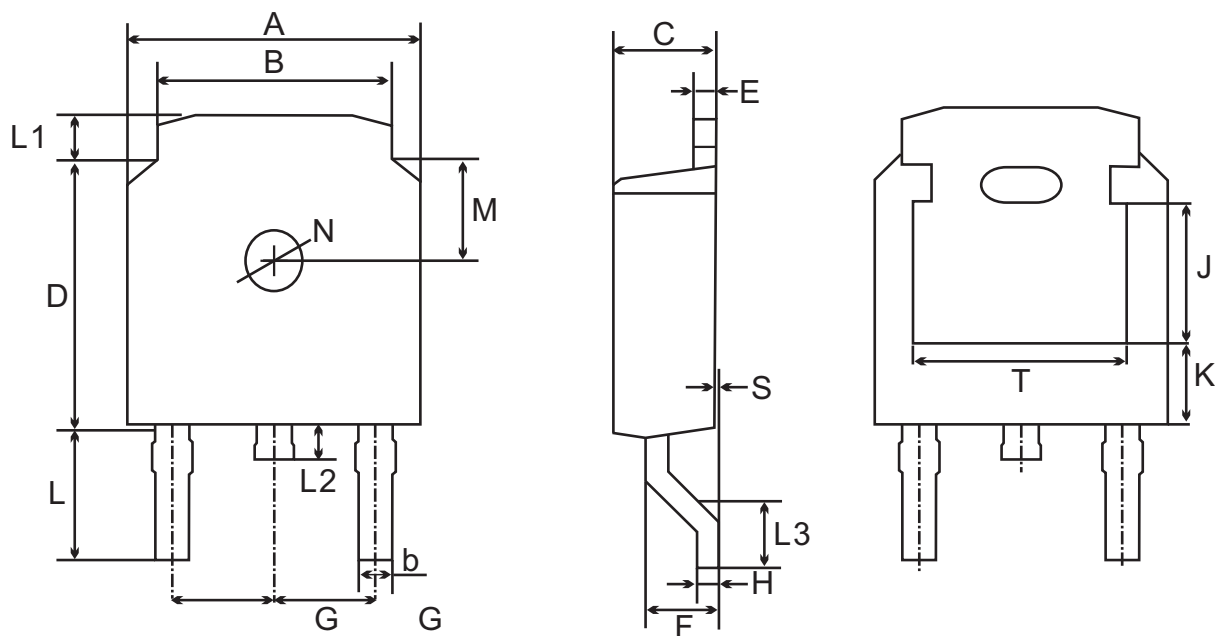




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PACKAGE OUTLINE

TO-252



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.