MBRD2040 - MBRD20200

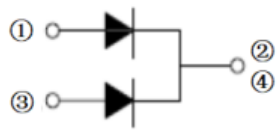
SCHOTTKY BARRIER RECTIFIER DIODES

VOLTAGE RANGE: 40 - 200V
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

TO-252(D-PAK)



Mechanical Data

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Lead solderable per MIL-STD-202, method 208 guranteed
- Mounting position: Any
- Weight: 2.24 grams

RoHS COMPLIANT

Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

CHARACTERISTICS	SYMBOL	MBRD2040	MBRD2045	MBRD2060	MBRD20100	MBRD20150	MBRD20200	UNIT
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	$I_{(AV)}$	20.0						A
Peak Forward Surage Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	120						A
Maximum Forward Voltage at 10.0A DC per leg	V_F	0.60		0.70	0.85	0.90	0.92	V
Maximum DC Reverse Current T_J=25℃ at Rated DC Blocking Voltage T_J=125℃	I_R	0.1 20						mA
Typical Junction Capacitance Per Element (Note1)	C_J	600		400				pF
Typical Thermal Resistance (Note2)	$R_{\theta JA}$	45						℃/W
Operating Temperature Range	T_J	-55 to +150						℃
Storage Temperature Range	T_{STG}	-55 to +150						℃

NOTES: 1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2.Mounted on 10cm x 10cm x 1mm copper pad area

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

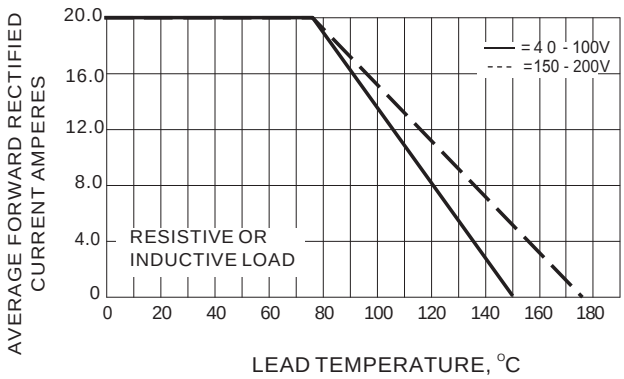


FIG.2-TYPICAL FORWARD CHARACTERISTICS

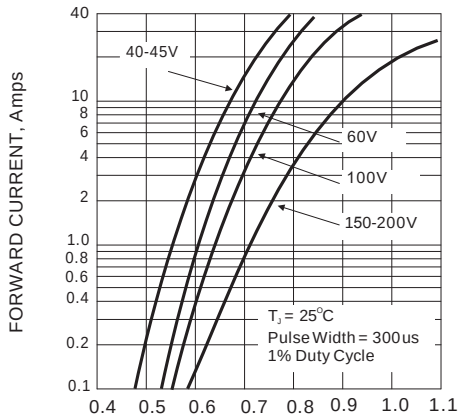


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

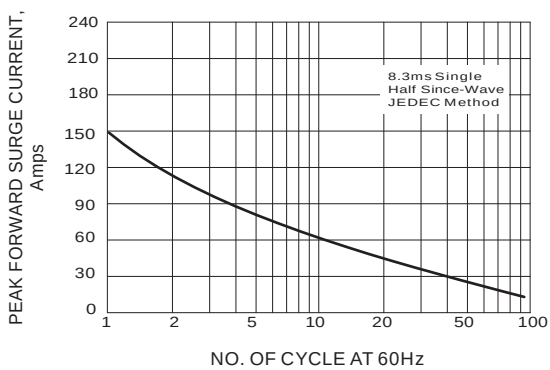
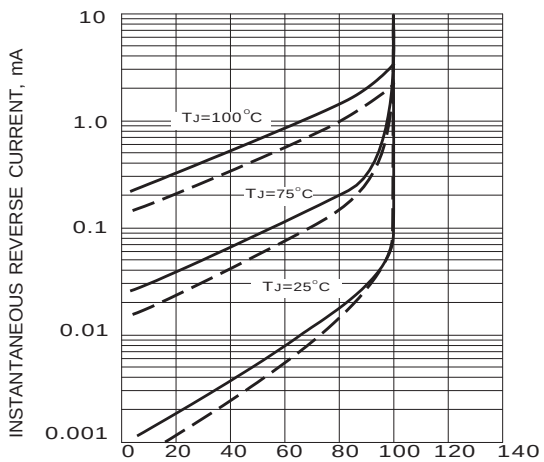
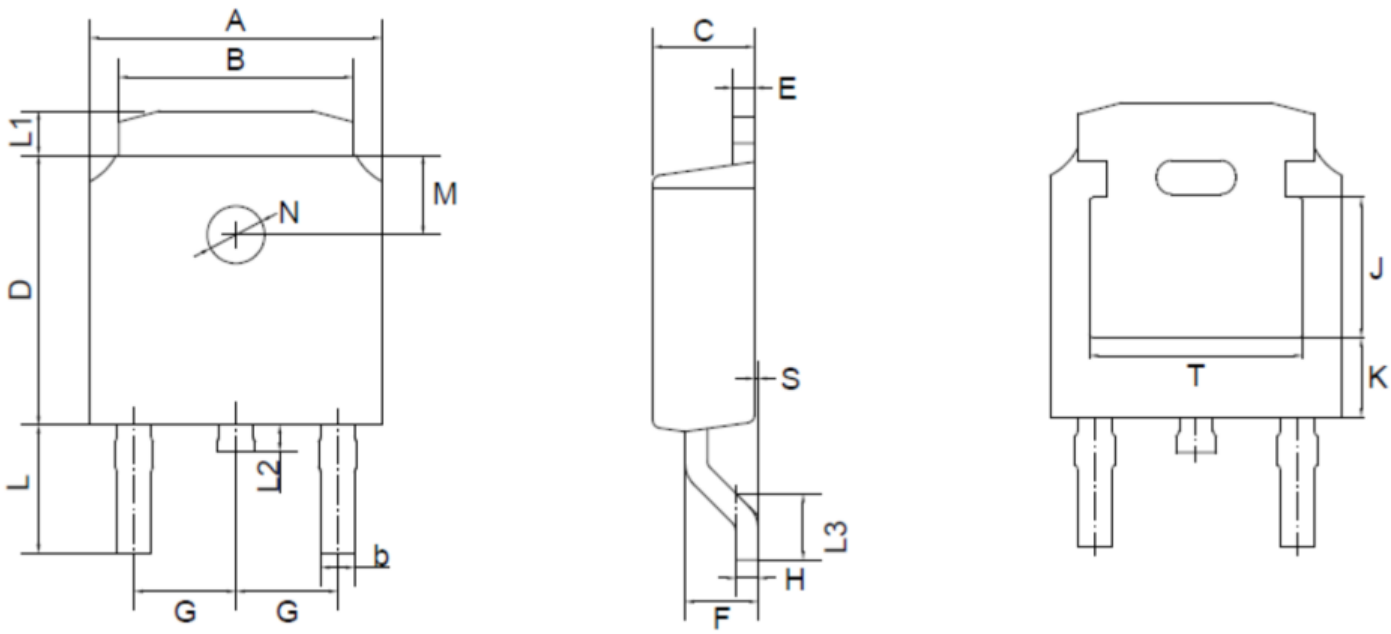


FIG.4 - TYPICAL REVERSE CHARACTERISTICS



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					