

MBR2040XT-AT THRU MBR20200XT-AT

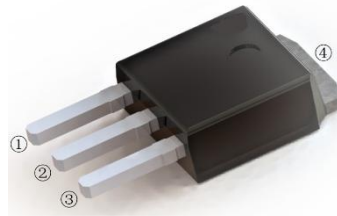
SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE: 40 to 200 Volts FORWARD CURRENT: 20.0 Amperes

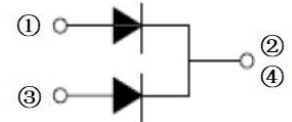
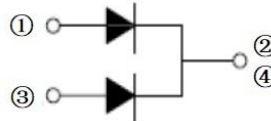
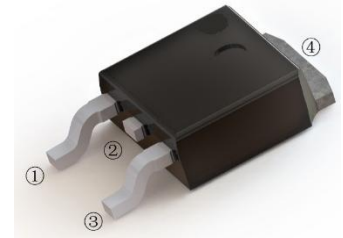
FEATURES

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

TO-251(I-PAK)



TO-252(D-PAK)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	TO-251	MBR2040VT -AT	MBR2045VT -AT	MBR2060VT -AT	MBR20100VT -AT	MBR20150VT -AT	MBR20200VT -AT	UNIT
	TO-252	MBR2040DT -AT	MBR2045DT -AT	MBR2060DT -AT	MBR20100DT -AT	MBR20150DT -AT	MBR20200DT -AT	
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 <sub(av)< sub=""></sub(av)<>	20.0						A
Peak Forward Surge 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 at Rated DC Blocking Voltage	I _R	0.1 20						mA
Typical Junction Capacitance Per Element (Note1)	C _J	600	400					pF
Typical Thermal Resistance (Note2)	R _{θJA}	45						°C/W
Operating Temperature Range	T _J	-55 to +150						°C
Storage Temperature Range	T _{STG}	-55 to +150						°C

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

Dated: 11/2018

Rev: 1.0

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Typical Characteristics curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

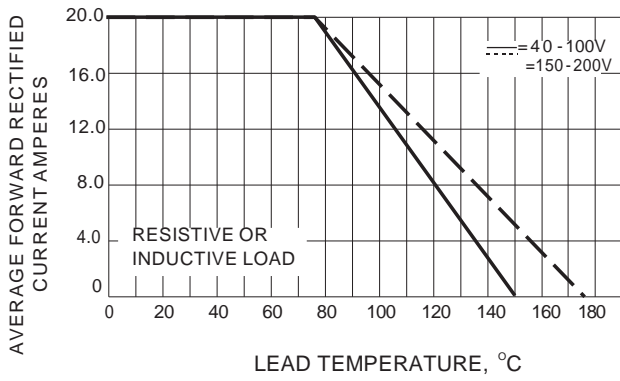


FIG.2-TYPICAL FORWARD CHARACTERISTICS

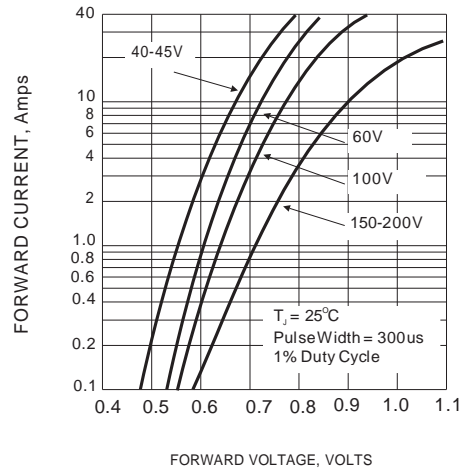


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

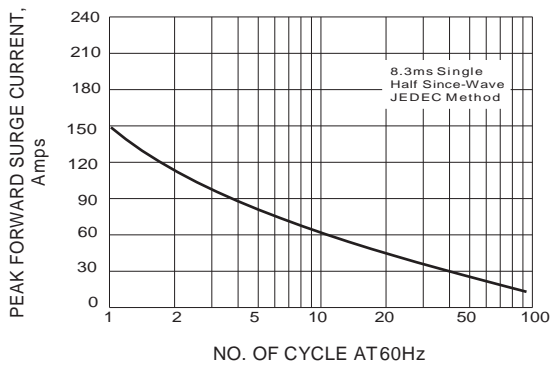
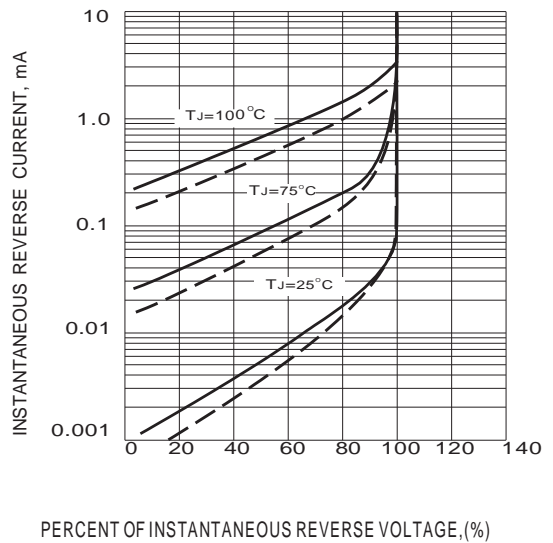


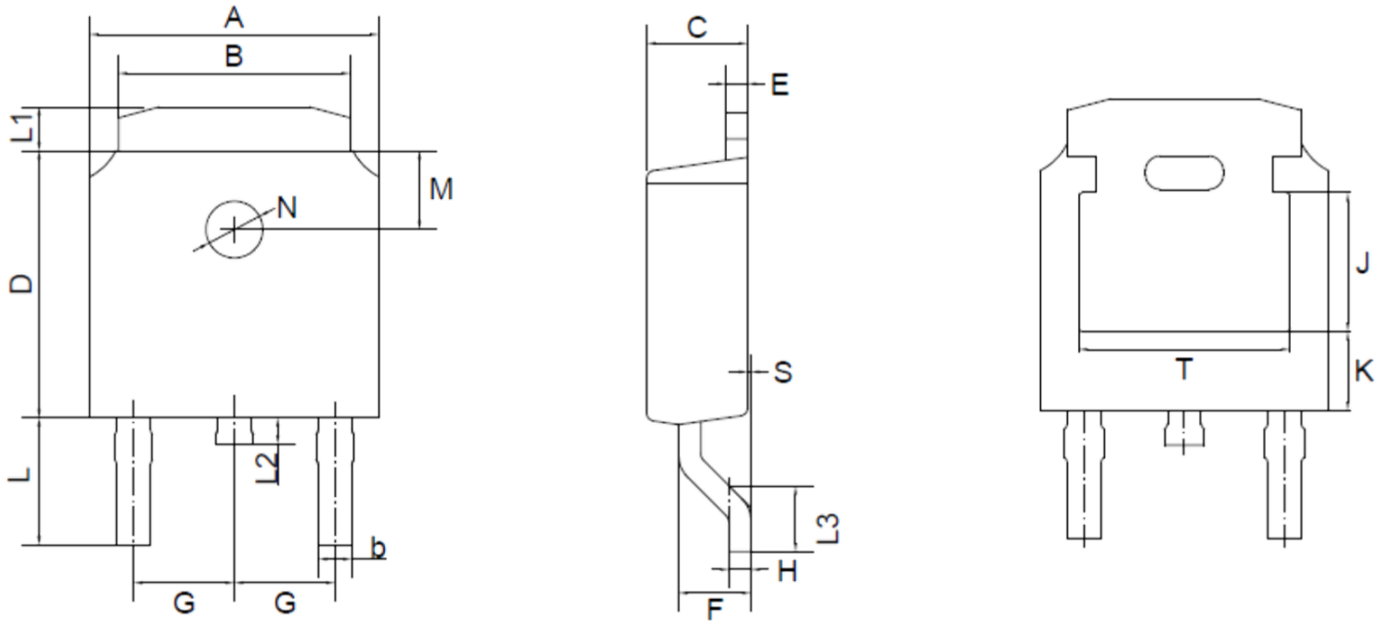
FIG.4 - TYPICAL REVERSE CHARACTERISTICS



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Package Outline

TO-252(D-PAK)



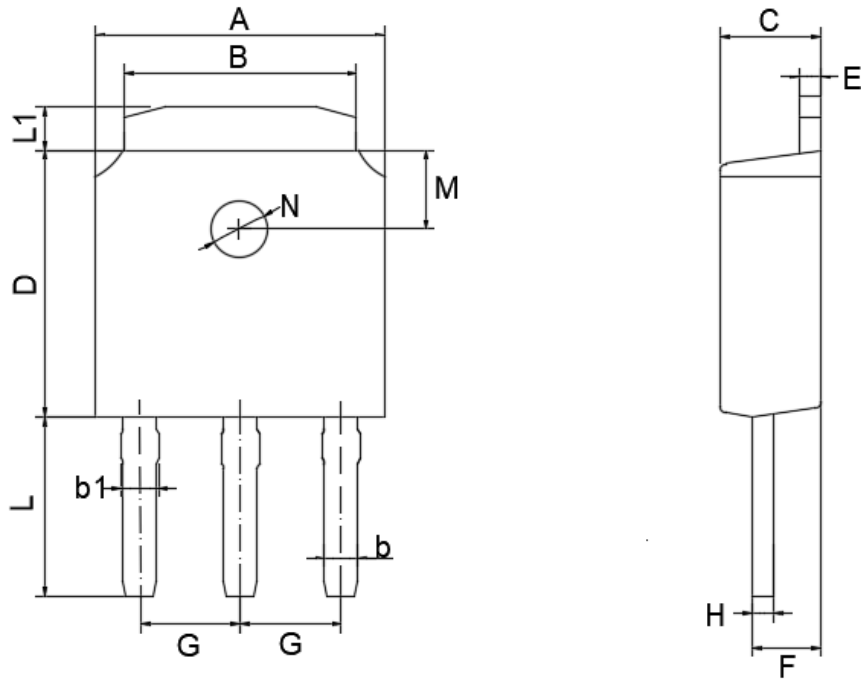
TO-252(D-PAK) mechanical data

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					

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Package Outline

TO-251(I-PAK)



TO-251(I-PAK) mechanical data

UNIT		A	B	b	b1	C	D	E	F	G	H	L	L1	M	N
mm	max	6.70	5.50	0.80	0.90	2.50	6.30	0.60	1.80	2.29	0.55	4.30	1.20	1.8	1.3
	min	6.30	5.10	0.30	0.76	2.10	5.90	0.40	1.30	TYPICAL	0.45	3.90	0.80	TYPICAL	TYPICAL
mil	max	264	217	31	35	98	248	24	71	90	22	169	47	71	51
	min	248	201	12	30	83	232	16	51	TYPICAL	18	154	31	TYPICAL	TYPICAL