

# MBR540-AT THRU MBR5200-AT

## SCHOTTKY BARRIER RECTIFIERS

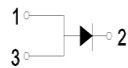
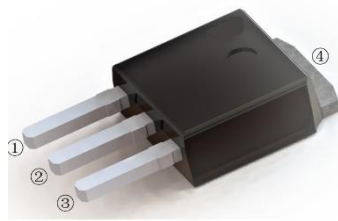
REVERSE VOLTAGE: 40 to 200 Volts

FORWARD CURRENT: 5.0 Amperes

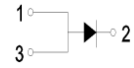
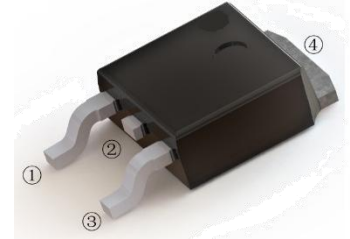
### FEATURES

- ◆ 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	MBR540VS -AT	MBR545VS -AT	MBR560VS -AT	MBR5100VS -AT	MBR5150VS -AT	MBR5200VS -AT	UNIT
	TO-252	MBR540DS -AT	MBR545DS -AT	MBR560DS -AT	MBR5100DS -AT	MBR5150DS -AT	MBR5200DS -AT	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	40	45	60	100	150	200	V
Maximum RMS Voltage	V <sub>RMS</sub>	28	31.5	42	70	105	140	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	40	45	60	100	150	200	V
Maximum Average Forward Rectified Current	I <sub>(AV)</sub>	5.0						A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	150						A
Maximum Forward Voltage at 5.0A DC	V <sub>F</sub>	0.60		0.70	0.85	0.90	0.92	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	0.5 20						mA
Typical Junction Capacitance Per Element (Note1)	C <sub>J</sub>	600		400				pF
Typical Thermal Resistance (Note2)	R <sub>θJA</sub>	35						°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150						°C
Storage Temperature Range	T <sub>STG</sub>	-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

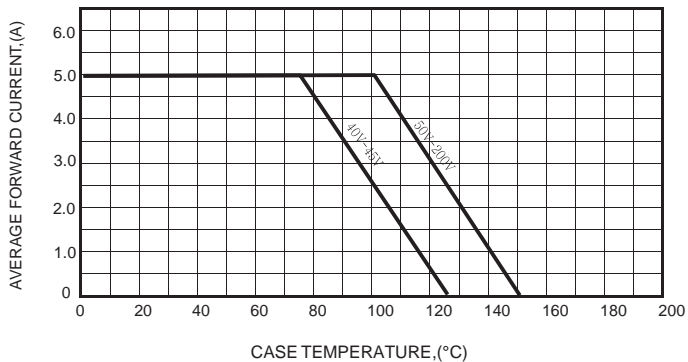


FIG.2-TYPICAL FORWARD CHARACTERISTICS

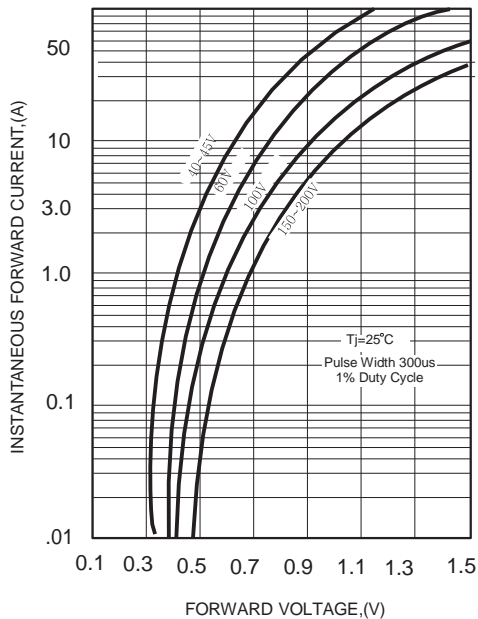


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

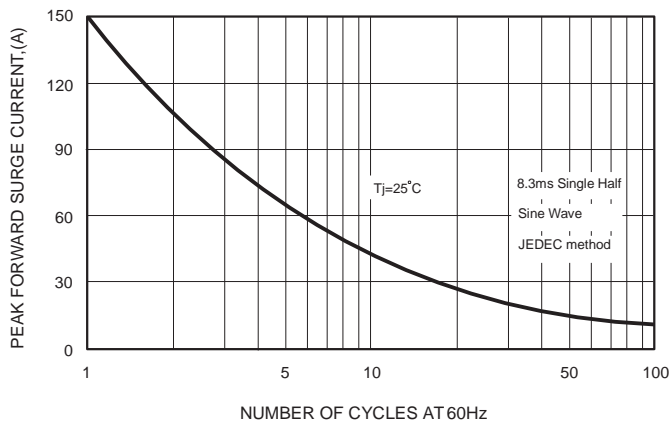
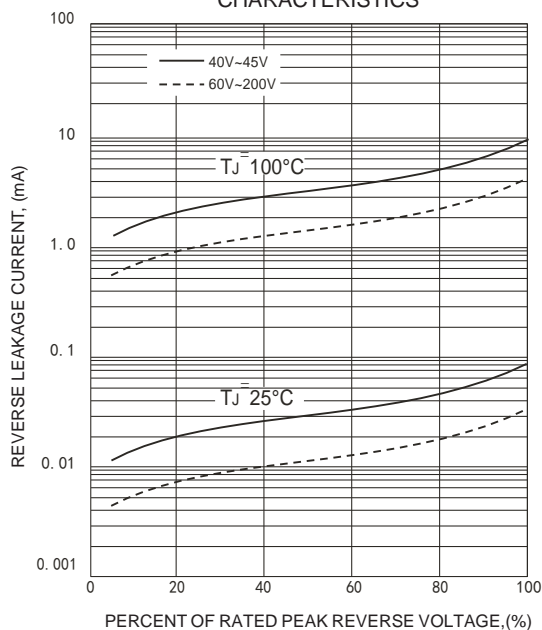


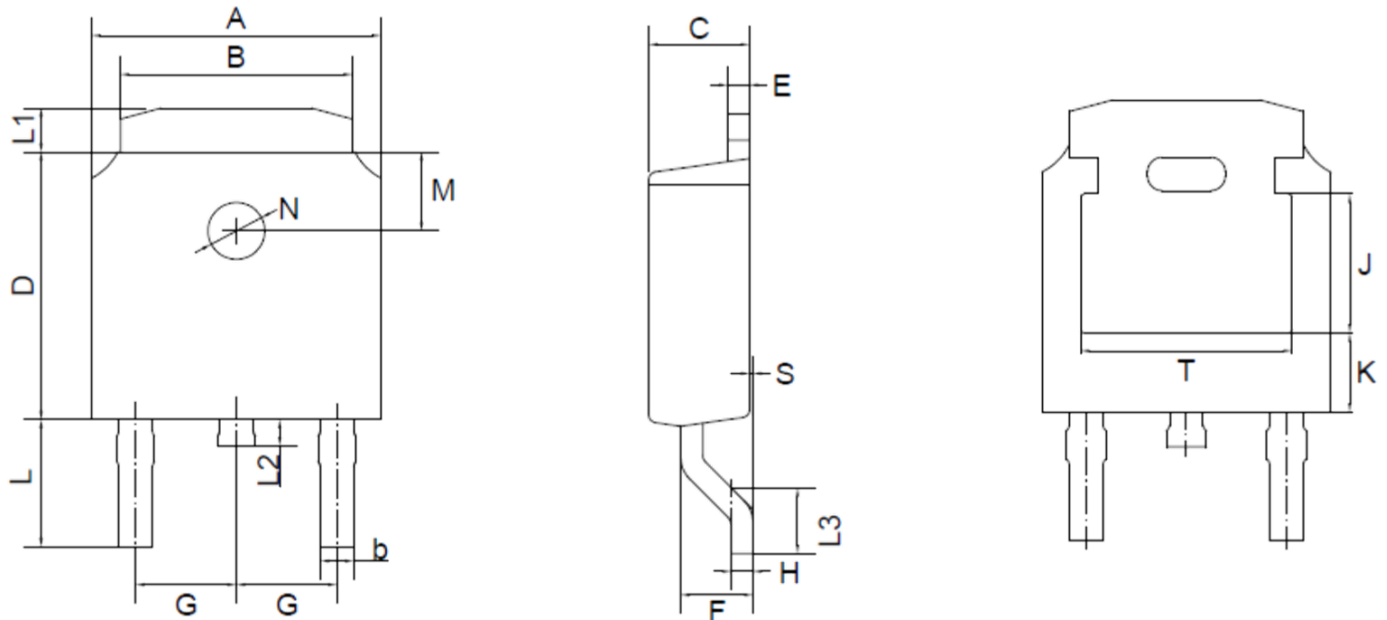
FIG.4 - TYPICAL REVERSE CHARACTERISTICS



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## Package Outline

### TO-252(D-PAK)



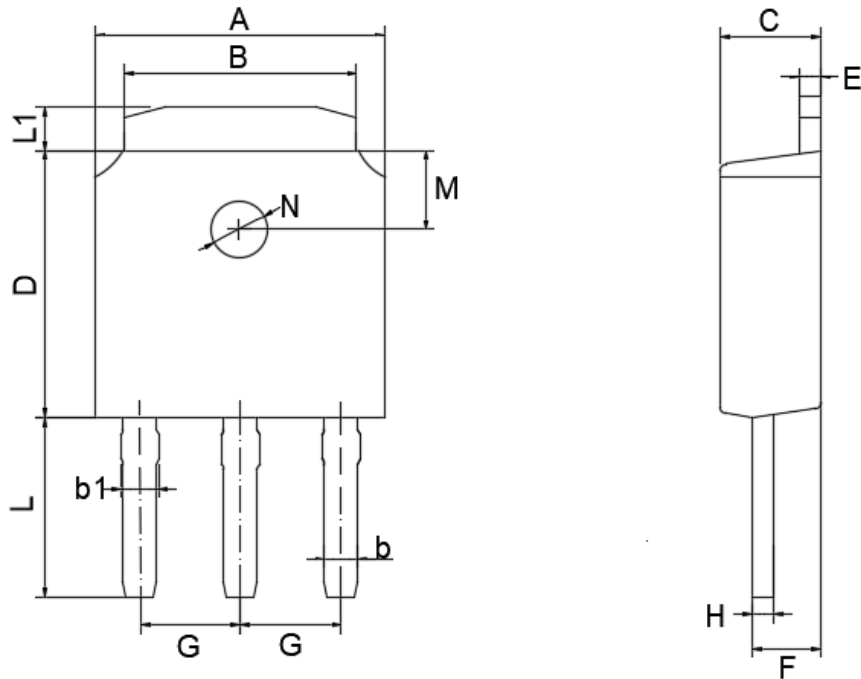
TO-252(D-PAK) mechanical data

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	0.55	3.1	1.2	1.0	1.75	0.1	1.8	1.3	3.16	1.80	4.83
	min	6.3	5.1	0.3	2.1	5.9	0.4	1.3	TYPICAL	0.45	2.7	0.8	0.6	1.40	0.0	TYPICAL	TYPICAL	ref.	ref.	ref.
mil	max	264	217	31	98	248	24	71	90	22	122	47	39	69	4	71	51	124	71	190
	min	248	201	12	83	232	16	51	TYPICAL	18	106	31	24	55	0	TYPICAL	TYPICAL	ref.	ref.	ref.

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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