



MBR3040C-ST THRU MBR30200C-ST

Schottky Bridge Rectifier

TO-263

Reverse Voltage - 40~200Volts

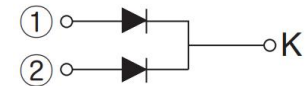
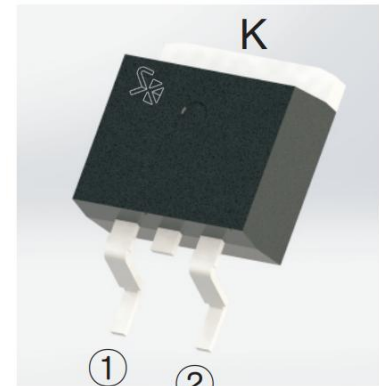
Forward Current - 30Amperes

Features

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

Maximum Ratings And Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.



Parameter		Symbol	MBR 3040 C-ST	MBR 3045 C-ST	MBR 3060 C-ST	MBR 30100 C-ST	MBR 30150 C-ST	MBR 30200 C-ST	Units
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	40	45	60	100	150	200	V
Maximum RMS Voltage		V _{RMS}	28	32	42	70	105	140	V
Maximum DC Blocking Voltage		V _{DC}	40	45	60	100	150	200	V
Maximum Average Forward Rectified Current	per diode	I _{F(AV)}	15						A
	per device		30						
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimpose on Rated Load(JEDEC Method)		I _{FSM}	200						A
Maximum Instantaneous Forward Voltage at 15A DC Per leg		V _F	0.75		0.80	0.88	0.92	0.95	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	Ta = 25°C	I _R	0.1			0.05			mA
	Ta = 125°C		20			20			
Typical Junction Capacitance ⁽¹⁾		C _J	600		400				pF
Typical Thermal Resistance ⁽²⁾		R _{θJA}	45						°C/W
Operating Junction Temperature Range		T _J	-55~+150				-55~+175		°C
Storage Temperature Range		T _{STG}	-55~+150				-55~+175		°C

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

(2).P.C.B. mounted with 10cm*10cm*1mm copper pad areas



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Typical Characteristics

Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE

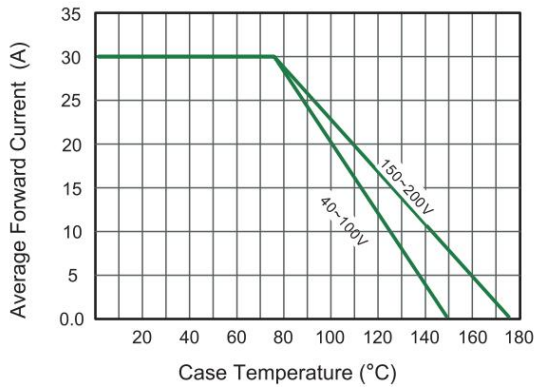


Fig.2 Typical Reverse Characteristics

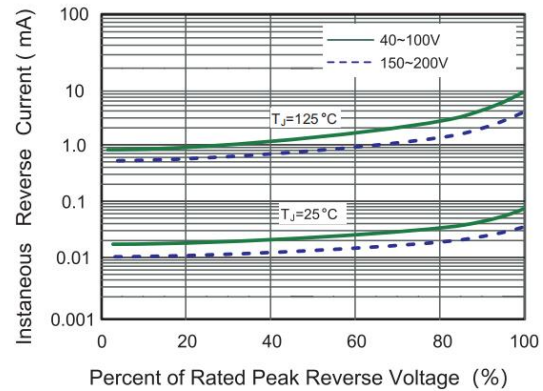


Fig.3 Typical Forward Characteristic(per leg)

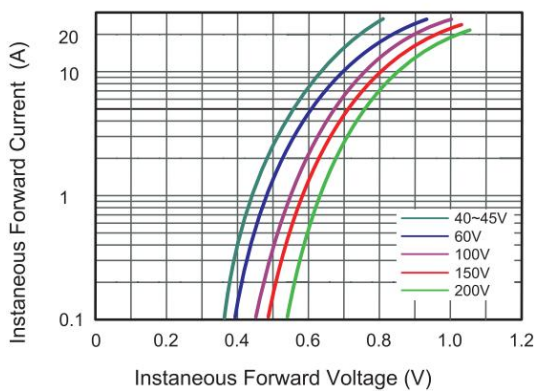


Fig.4 Typical Junction Capacitance

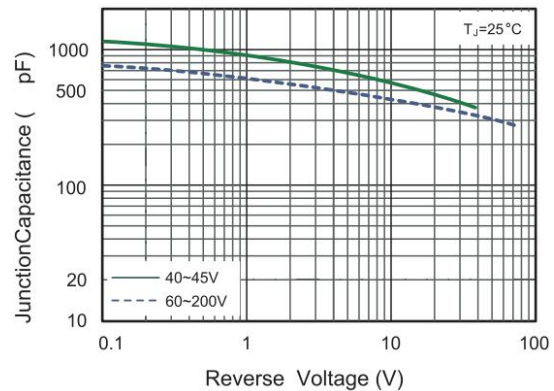


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

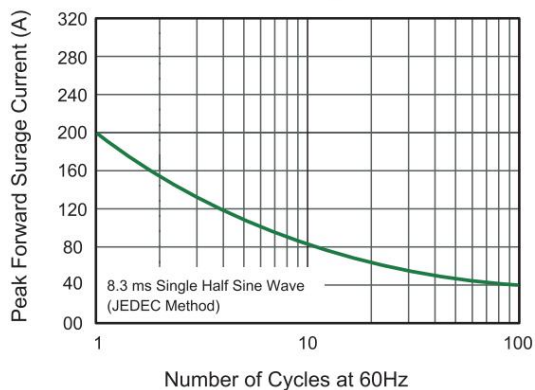
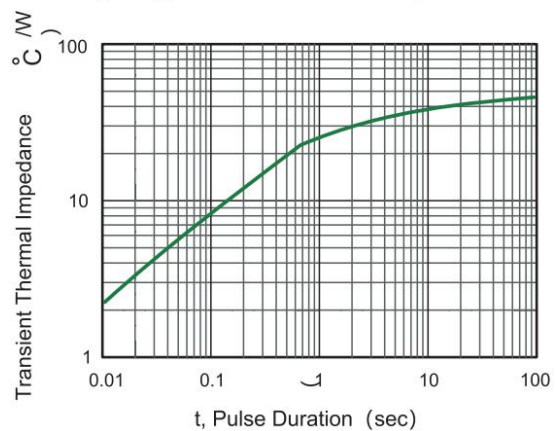


Fig.6- Typical Transient Thermal Impedance



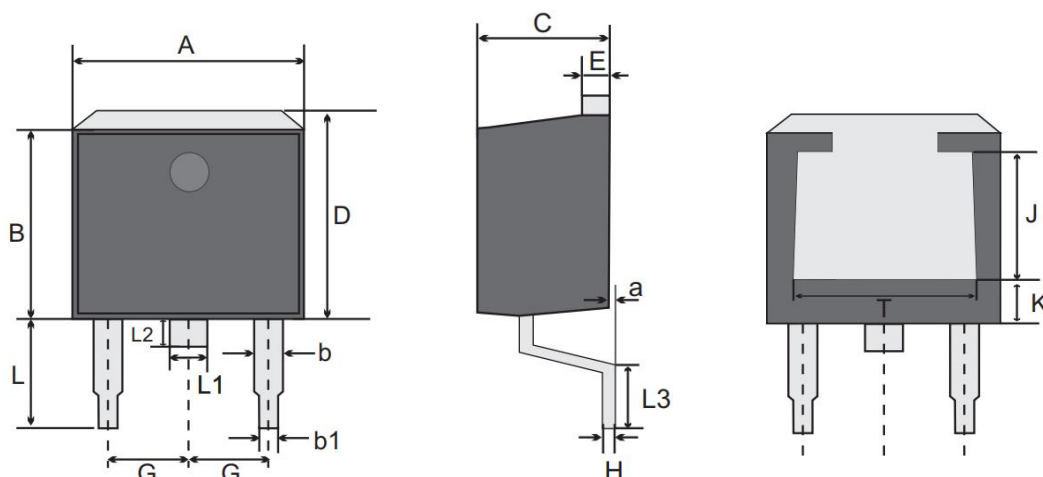


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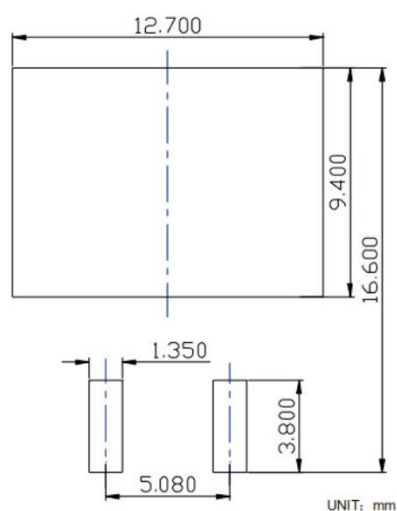
Package Information

TO-263

Dimensions in mm



UNIT		A	B	b	b1	C	D	E	G	H	L	L1	L2	L3	a	J	T	K
mm	max	10.4	9.0	1.47	0.91	4.80	10.28	1.40	2.74	0.58	6.0	1.47	1.4	3.18	0.1 ref.	4.7 ref.	7.7 ref.	3.17 ref.
	typ	9.94	8.7	1.27	0.81	4.57	9.98	1.27	2.54	0.38	5.5	1.27	1.2	2.78				
	min	9.8	8.4	1.07	/	4.40	9.68	1.20	2.34	0.30	5.0	1.07	1.0	2.38				
mil	max	409	354	58	36	189	405	55	108	23	236	58	55	125	4.0 ref.	185 ref.	303 ref.	125 ref.
	typ	391	343	50	32	180	393	50	100	15	217	50	47	109				
	min	386	331	42	/	173	381	47	92	12	197	42	39	94				



UNIT: mm

SUGGESTED SOLDER PAD LAYOUT