

MBR4040SCT-MBR40200SCT

40A SCHOTTKY BARRIER RECTIFIER

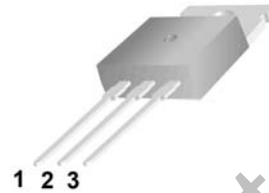


MBR4040SCT-MBR40200SCT

Features:

- ☐ Low power loss. high efficiency.
High surge capacity
- ☐ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- ☐ Metal silicon junction, majority carrier conduction.
- ☐ High current Capability. low forward voltage drop.
- ☐ Guard ring for over voltage protection.

TO-220



1.Anode 2.Cathode 3. Anode

Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter		Symbol	MBR 4040 SCT	MBR 4045 SCT	MBR 4050 SCT	MBR 4060 SCT	MBR 4080 SCT	MBR 4090 SCT	MBR 40100 SCT	MBR 40150 SCT	MBR 40200 SCT	Unit
Maximum Recurrent Peak Reverse Voltage		V _{RRM}	40	45	50	60	80	90	100	150	200	V
Maximum RMS Voltage		V _{RMS}	28	31.5	35	42	56	63	70	105	140	
Maximum DC Blocking Voltage		V _{R(DC)}	40	45	50	60	80	90	100	150	200	
Maximum Average Forward Current		I _{F(AV)}	40									A
Peak Forward Surge Current:8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I _{FSM}	300									
Maximum Forward Voltage at 20A per leg		V _F	0.65		0.72			0.85		0.92		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _j =25℃	I _R	0.1						0.05		mA	
	T _j =125℃		20									
Maximum Operating Junction Temperature		T _j	150				175				℃	
Storage Temperature		T _{stg}	-55~+150				-65~+175					
Typical Thermal Resistance		R _{θJC}	1.3									℃/W

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Typical Characteristics

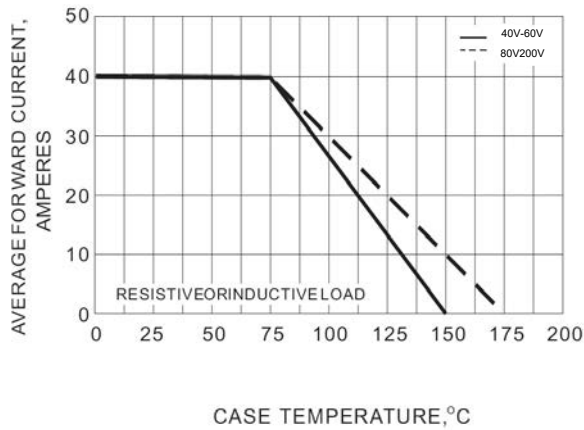


Fig.1 FORWARD CURRENT DERATING CURVE

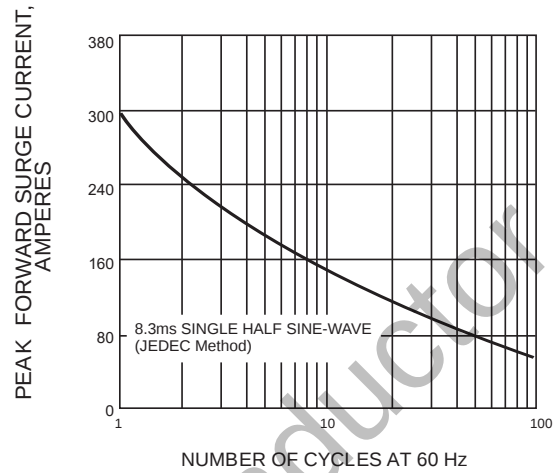


Fig.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

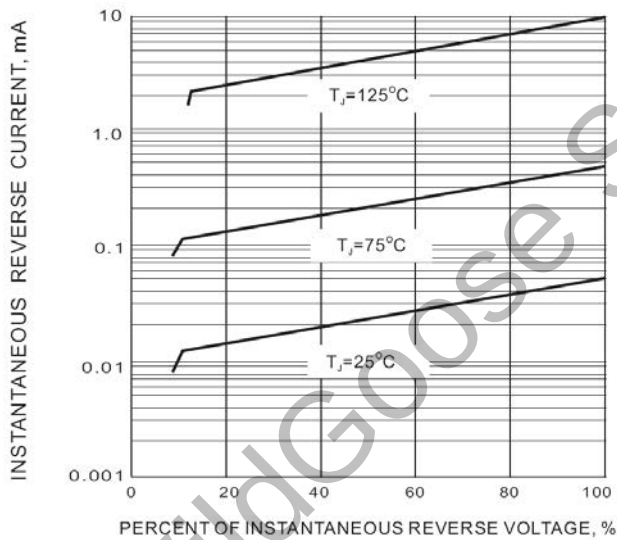


Fig 3. TYPICAL REVERSE CHARACTERISTIC

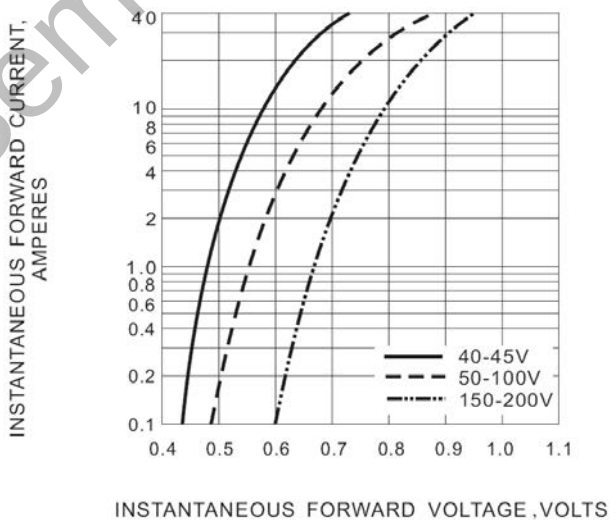
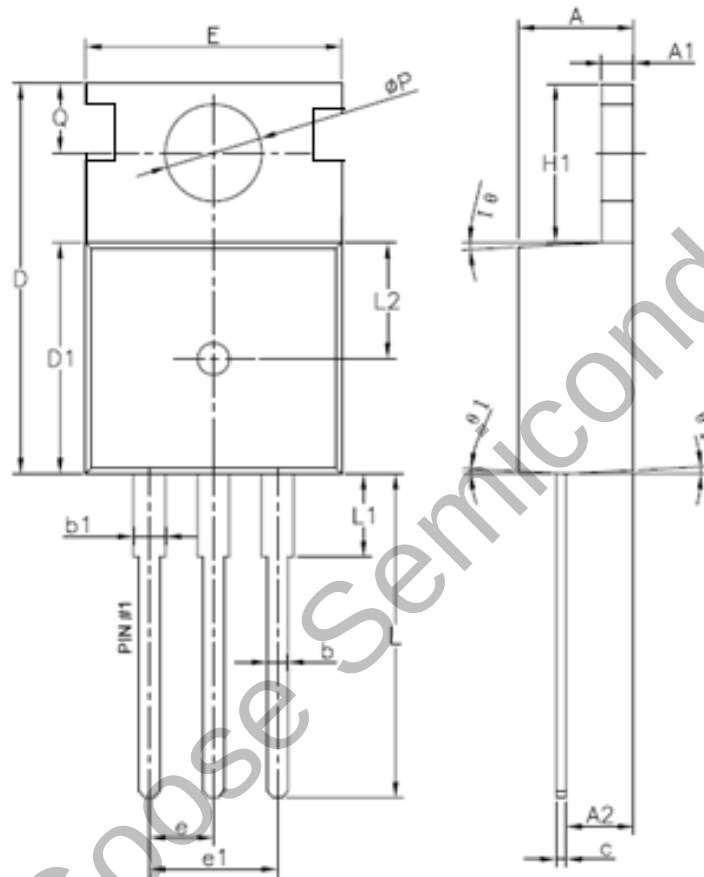


Fig 4. TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

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Package Dimension

TO-220



Unit: mm

Symbol	Min	Normal	Max	Symbol	Min	Normal	Max
A	4.4	4.5	4.6	e		2.54	
A1	1.27	1.3	1.33	e1		5.08	
A2	2.3	2.4	2.5	H1	6.3	6.5	6.7
b	0.7	/	0.9	L	13.0	13.38	13.5
b1	1.25	/	1.42	L1	/	/	3.5
c	0.45	0.5	0.6	L2		4.6	
D	15.3	15.7	16.1	ΦP	3.55	3.6	3.65
D1	9.1	9.2	9.3	Q	2.73	/	2.87
E	9.7	9.9	10.2	θ_1 (°)	1	3	5