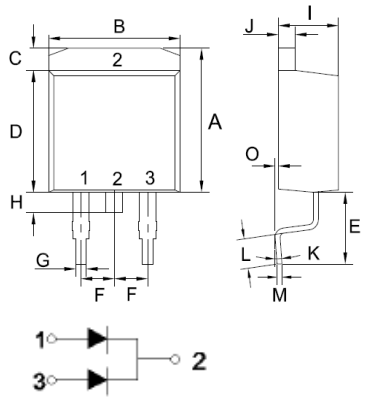
MBR2040CGD~MBR20200CGD

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 40 to 200 Volts Forward Current - 20.0 Amperes

TO-263 (D² PAK)



TO-263 (D² PAK) Unit:mm		
DIM	MIN	MAX
A	10.44	10.84
B	9.81	10.21
C	1.44	1.84
D	8.80	9.20
E	4.46	4.66
F	2.44	2.64
G	0.61	1.01
H	0.70	1.30
I	4.27	4.87
J	1.07	1.47
K	0°	8°
L	2.10	2.50
M	0.30	0.46
O	0	0.25

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency.
- High current capability
- For use in low voltage, high frequency inverters free wheeling, and polarlity protection applications.
- Lead free in comply with EU RoHS

MECHANICAL DATA

- Case: DPAK molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

PARAMETER	SYMBOL	MBR 2040CGD	MBR 2045CGD	MBR 2050CGD	MBR 2060CGD	MBR 2080CGD	MBR 2090CGD	MBR 20100CGD	MBR 20150CGD	MBR 20200CGD	UNITS
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	V
Maximum DC Blocking Voltage	V_{DC}	40	45	50	60	80	90	100	150	200	V
Maximum Average Forward Current (See fig.1)	$I_{F(AV)}$	20									A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I_{FSM}	150A									A
Maximum Forward Voltage at 10A, per leg	V_F	0.7		0.8		0.85			0.92		V
Maximum DC Reverse Current T_J=25 °C at Rated DC Blocking Voltage T_J=125°C	I_R	0.05 20				0.02 20					mA
Typical Thermal Resistance	$R_{\theta JC}$	3									°C / W
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-50 to + 150							-55 to +175		°C

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RATINGS AND CHARACTERISTIC CURVES MBR2040CGD THRU MBR20200CGD

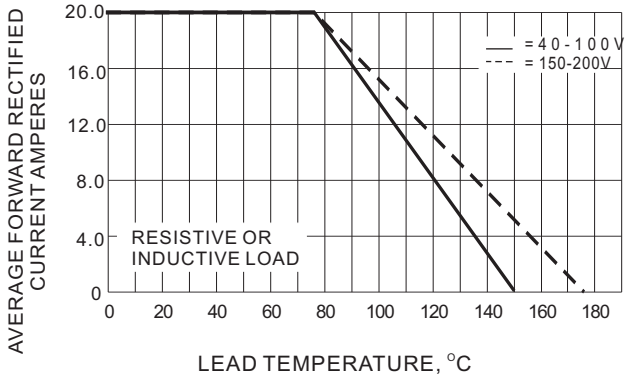

Fig.1- FORWARD CURRENT DERATING CURVE

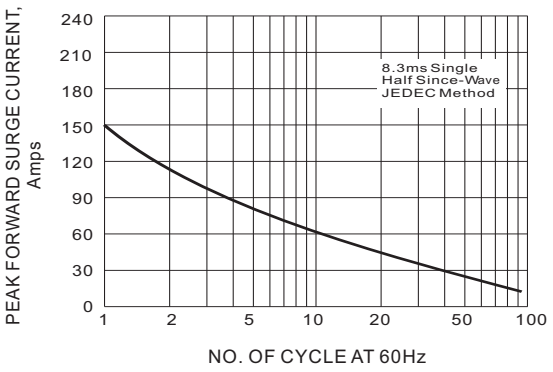

Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

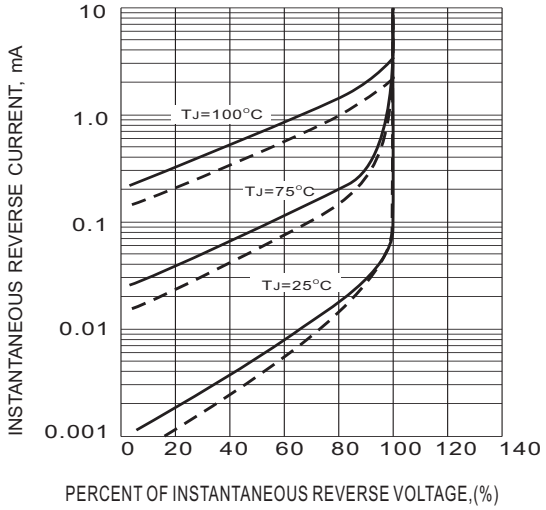

Fig.3- TYPICAL REVERSE CHARACTERISTICS

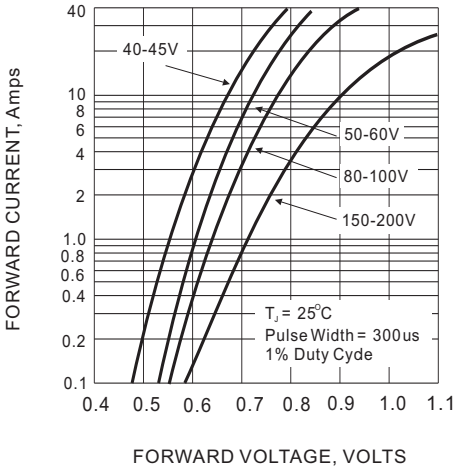

Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!

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