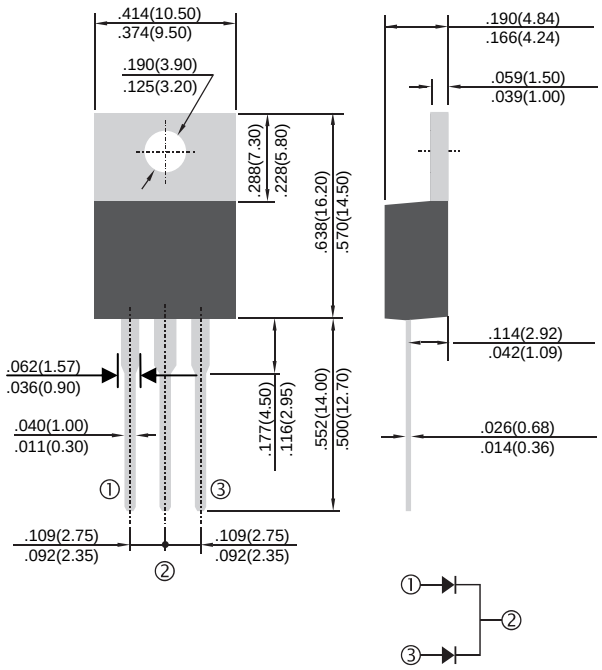
YEA SHIN TECHNOLOGY CO., LTD MBRL2040CT THRU MBRL20150CT

20A Low V_F SCHOTTKY Barrier Rectifier
Voltage - 40 to 150 Volts Current – 20 Amperes

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0. 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.

TO-220AB Unit:inch(mm)



Mechanical Data

- Case: TO -220AB molded plastic
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any

Maximum Ratings & Thermal Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)
(Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate by 20%.)

Parameters	Symbol	MBRL 2040CT	MBRL 2045CT	MBRL 2060CT	MBRL 20150CT	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	45	60	150	V
Maximum RMS Voltage	V_{RMS}	28	31.5	42	105	V
Maximum DC Blocking Voltage	V_{DC}	40	45	60	150	V
Maximum Average Froward Rectified Current	$I_{(AV)}$	20				A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150			200	A
Maximum Instantaneous Forward Voltage at 10.0A Per Diode	V_F	0.5		0.6	0.85	V
Maximum DC Reverse Current Ta=25℃ at Rated DC Blocking Voltage Ta=125℃	I_R	0.1 35 (Typ.)		0.1 20 (Typ.)	0.05 3 (Typ.)	mA
Typical Junction Capacitance (Note 1)	C_J	860		480	280	pF
Maximum Thermal Resistance(Note 2)	$R_{\theta JC}$	2				℃/W
Operating Temperature Range	T_J	-55 to +150				℃
Storage Temperature Range	T_{STG}	-55 to +150				℃

Notes: 1. Measure at 1.0MHz and applied reverse voltage of 4.0 Vdc.
2. Mounted on infinite heatsink.

DEVICE CHARACTERISTICS

MBRL2040CT THRU MBRL20150CT

40-45V

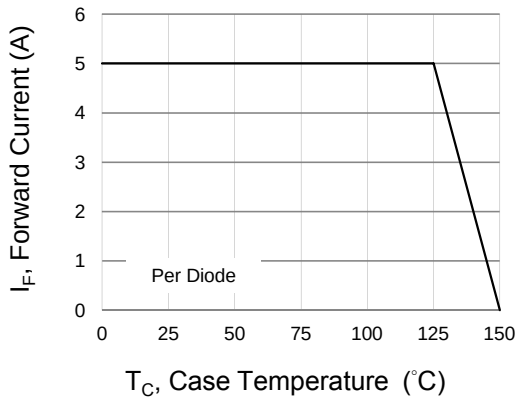


Fig.1 Forward Current Derating Curve

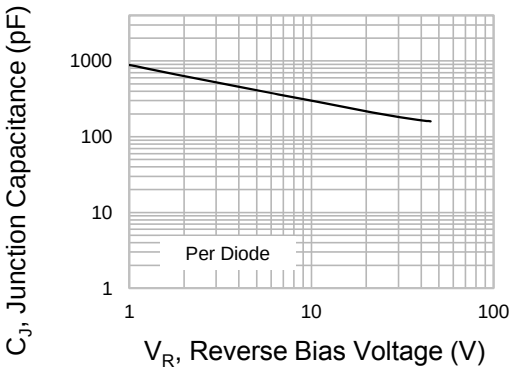


Fig.2 Typical Junction Capacitance

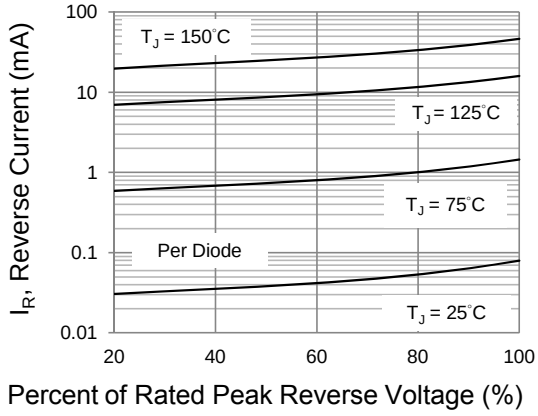


Fig.3 Typical Reverse Characteristics

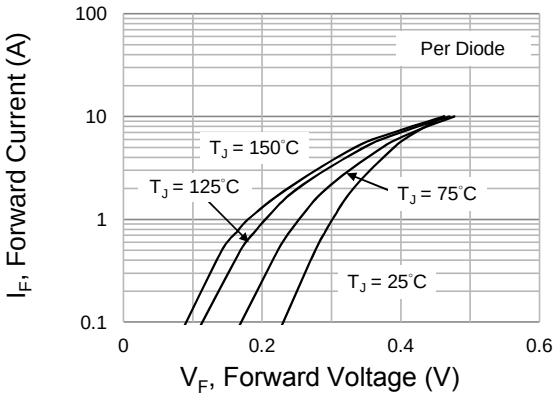


Fig.4 Typical Forward Characteristics

DEVICE CHARACTERISTICS

MBRL2040CT THRU MBRL20150CT

60V

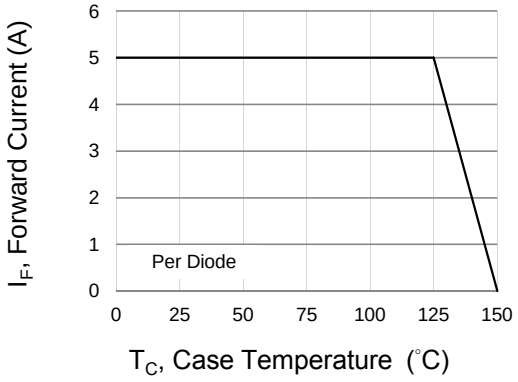


Fig.1 Forward Current Derating Curve

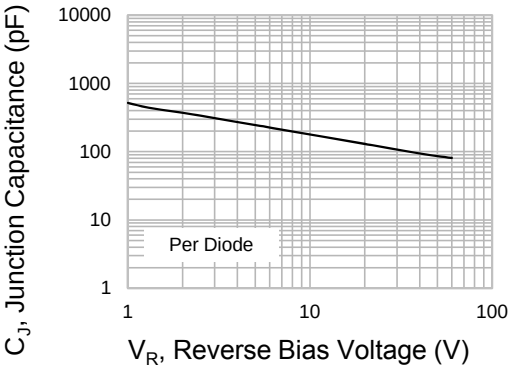


Fig.2 Typical Junction Capacitance

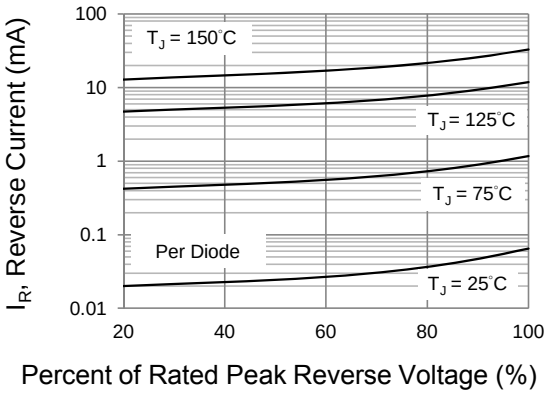


Fig.3 Typical Reverse Characteristics

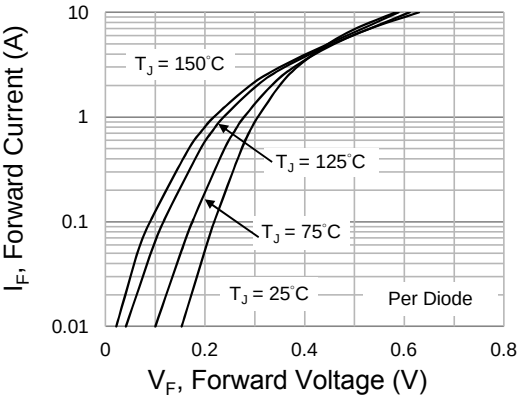


Fig.4 Typical Forward Characteristics

DEVICE CHARACTERISTICS

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150V

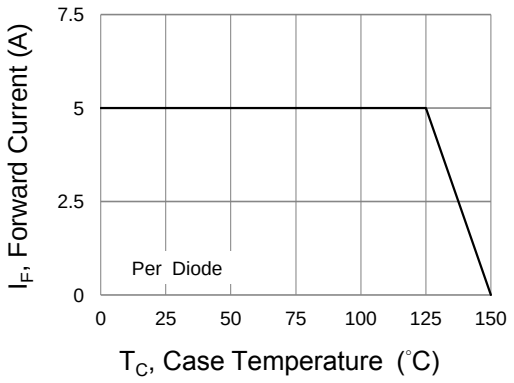

Fig.1 Forward Current Derating Curve

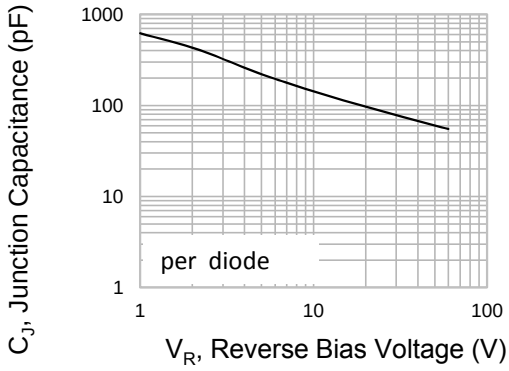

Fig.2 Typical Junction Capacitance

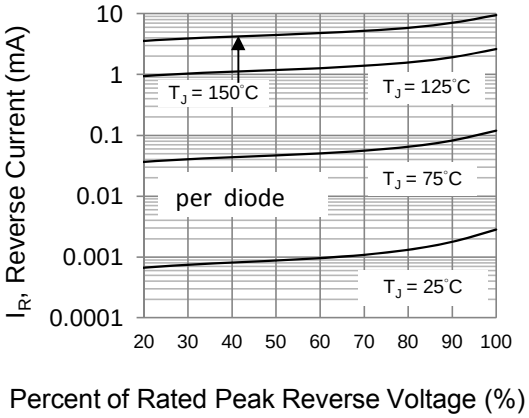

Fig.3 Typical Reverse Characteristics

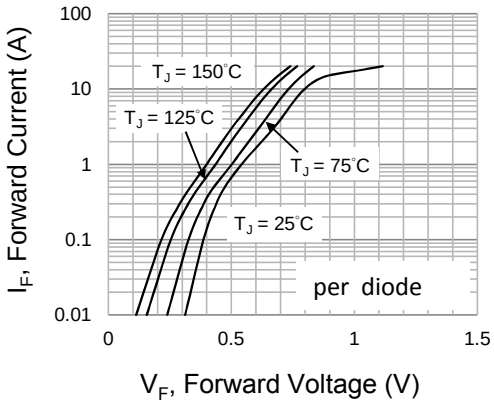

Fig.4 Typical Forward Characteristics