

Schottky Barrier Rectifier

MBR2090CT

FEATURES

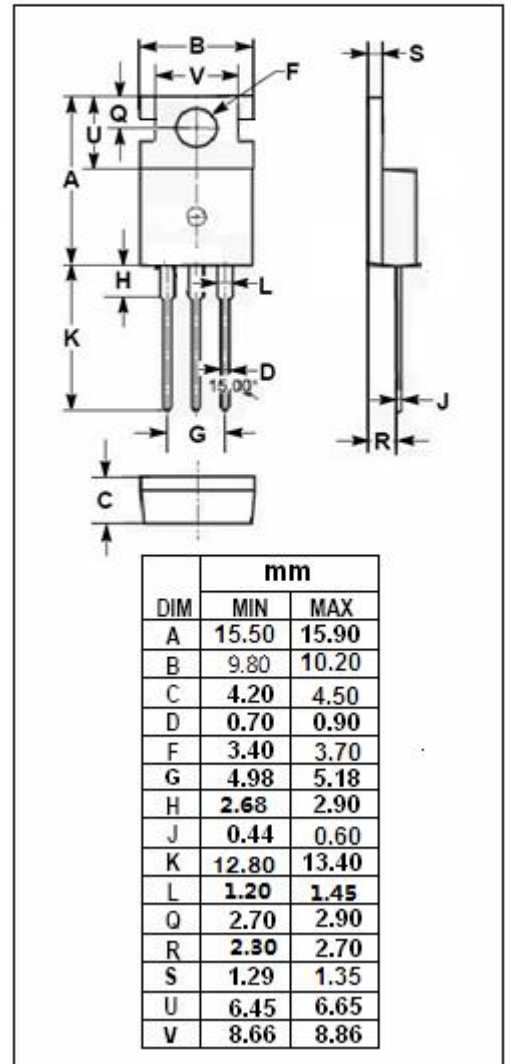
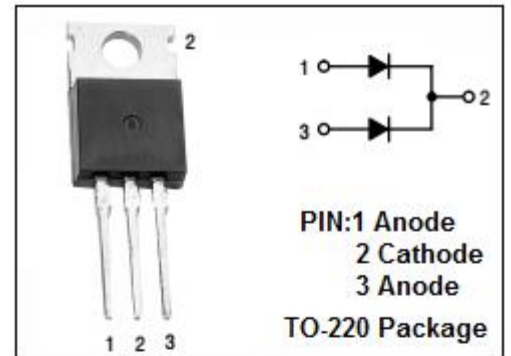
- Guard -Ring for Stress Protection
- Low Forward Voltage
- High Operating Junction Temperature
- Guaranteed Reverse Avalanche
- Low Power Loss/High Efficiency
- High surge capability
- Low Stored Charge Majority Carrier Conduction
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

MECHANICAL CHARACTERISTICS

- Case: Epoxy, Molded
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 Seconds

ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
VRRM VRWM VR	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	90	V
IF(AV)	Average Rectified Forward Current (Rated VR) TC= 133°C	10	A
IFRM	Peak Repetitive Forward Current (Rated VR, Square Wave, 20kHz) TC= 133°C	20	A
IFSM	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	150	A
IIRM	Peak Repetitive Reverse Surge Current (20 μ s, 1.0kHz)	0.5	A
TJ	Junction Temperature	-65~150	°C
Tstg	Storage Temperature Range	-65~175	°C
dv/dt	Voltage Rate of Change (Rated VR)	10,000	V/ μ s



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SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.0	$^{\circ}\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	60	$^{\circ}\text{C/W}$

ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300 μ s, Duty Cycle $\leq$ 2%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F = 10\text{A}; T_C = 25^{\circ}\text{C}$ $I_F = 10\text{A}; T_C = 125^{\circ}\text{C}$ $I_F = 20\text{A}; T_C = 25^{\circ}\text{C}$ $I_F = 20\text{A}; T_C = 125^{\circ}\text{C}$	0.85 0.75 0.95 0.85	V
I_R	Maximum Instantaneous Reverse Current	Rated DC Voltage, $T_C = 25^{\circ}\text{C}$ Rated DC Voltage, $T_C = 125^{\circ}\text{C}$	0.1 6.0	mA