

Schottky Barrier Rectifier

MBR2045CS

FEATURES

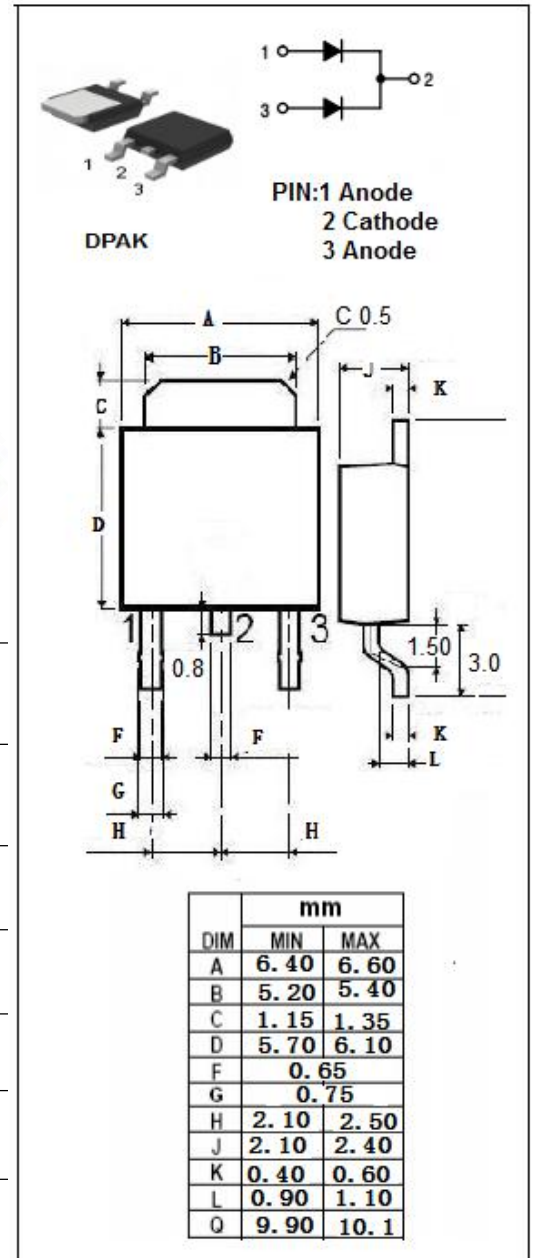
- Guard -Ring for Stress Protection
- Low Forward Voltage
- High Operating Junction Temperature
- Guaranteed Reverse Avalanche
- Pb-Free Packages are Available
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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
V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	45	V
I <sub>F(AV)</sub>	Average Rectified Forward Current (Rated V <sub>R</sub> ) T <sub>C</sub> = 135°C	20	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	150	A
I <sub>RRM</sub>	Peak Repetitive Reverse Surge Current (20 μs, 1.0kHz)	1.0	A
T <sub>J</sub>	Junction Temperature	-65~175	°C
T <sub>stg</sub>	Storage Temperature Range	-65~175	°C



**Schottky Barrier Rectifier****MBR2045CS****THERMAL CHARACTERISTICS**

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

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F = 10A ; T_C = 125^{\circ}C$ $I_F = 20A ; T_C = 25^{\circ}C$ $I_F = 20A ; T_C = 125^{\circ}C$	0.57 0.84 0.72	V
$I_R$	Maximum Instantaneous Reverse Current	Rated DC Voltage, $T_C = 25^{\circ}C$ Rated DC Voltage, $T_C = 125^{\circ}C$	0.1 5.0	mA