

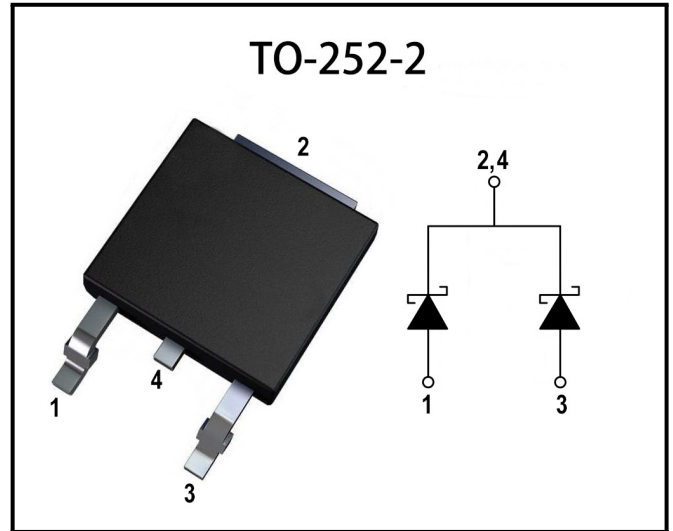
MBR1045CS

Schottky Barrier Diode

Features

- 10 A Total (10A Per Diode Leg)
- Guard Ring for Stress Protection
- Low Forward Voltage
- 175°C Operating Junction Temperature
- Epoxy Meets UL 94 V 0 @ 0.125 in
- Low Power Loss/High Efficiency
- High Surge Capacity
- Low Stored Charge Majority Carrier Conduction
- Pb Free Packages are Available

Package



General Description

- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 Seconds
- Case: Epoxy, Molded
- Weight: 1.2grams (approximately)

Maximum Ratings @ $T_A=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Unit
V_{RRM}	Peak Reverse Voltage	45	V
$I_{F(AV)}$	Average Rectified Forward Current (Rated V_R) $T_C=133^\circ\text{C}$	10	A
I_{FRM}	Peak Repetitive Forward Current (Rated V_R , Square Wave, 20 kHz) $T_C=133^\circ\text{C}$	10	A
I_{FSM}	Non-repetitive Peak Surge Current (Surge applied at rates load conditions halfwave, single phase, 60Hz)	200	A
I_{RRM}	Peak Repetitive Reverse Surge Current (2.0us, 1.0kHz)	5	A
T_J	Operation Junction Temperature Range	-65 to +175	$^\circ\text{C}$
d_v/d_t	Storage Temperature Range (Rated V_R)	10,000	V/us

Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test conditions	Value	Unit
V_F	Maximum Instantaneous Forward Voltage	$I_F=10\text{A}, T_C=25^\circ\text{C}$	0.5	V
I_R	Maximum Instantaneous Reverse Current	Rated dc Voltage	$T_C=25^\circ\text{C}$	0.05
			$T_C=125^\circ\text{C}$	6.0

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Please refer to <http://www.born-tw.com> for current information. **Revision: 2022-Jan-1-A**



Typical Performance Characteristics ($T_J = 25^\circ\text{C}$, unless otherwise noted)

Figure 1: Typical Forward Voltage Per Diode

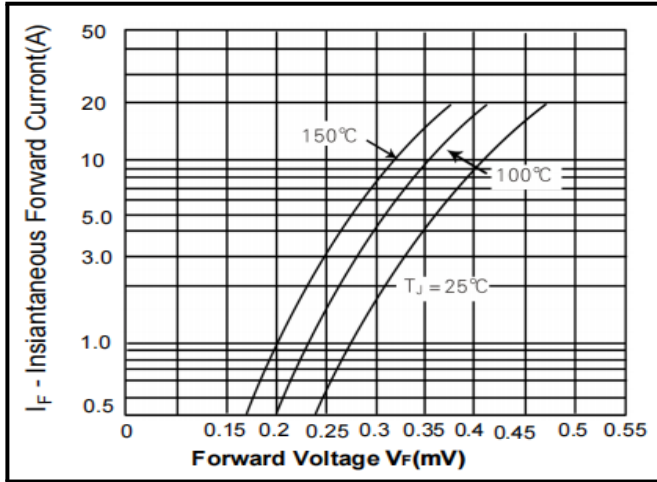


Figure 2: Typical Reverse Current Per Diode

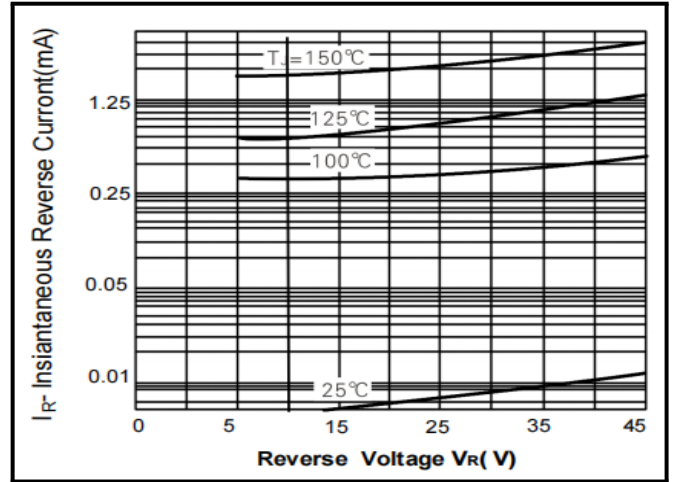


Figure 3: Forward Current Derating Curve

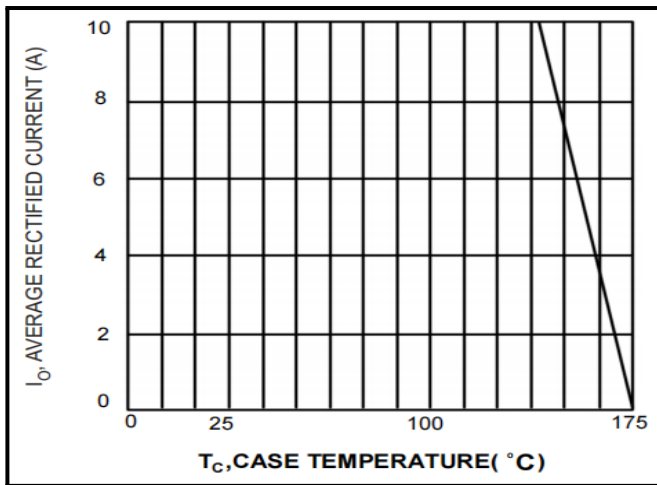
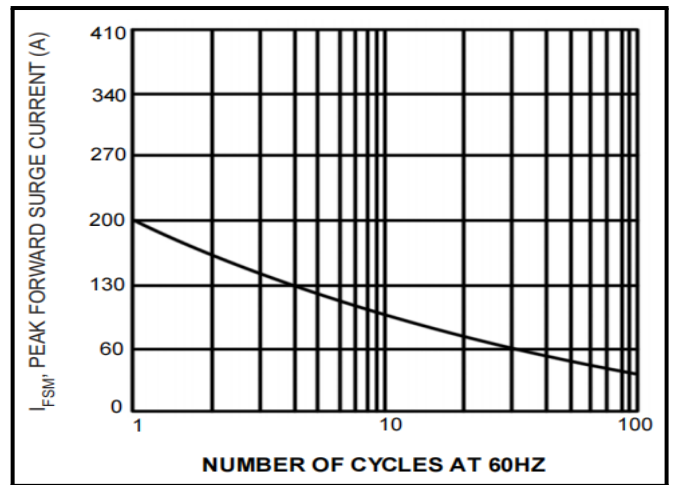


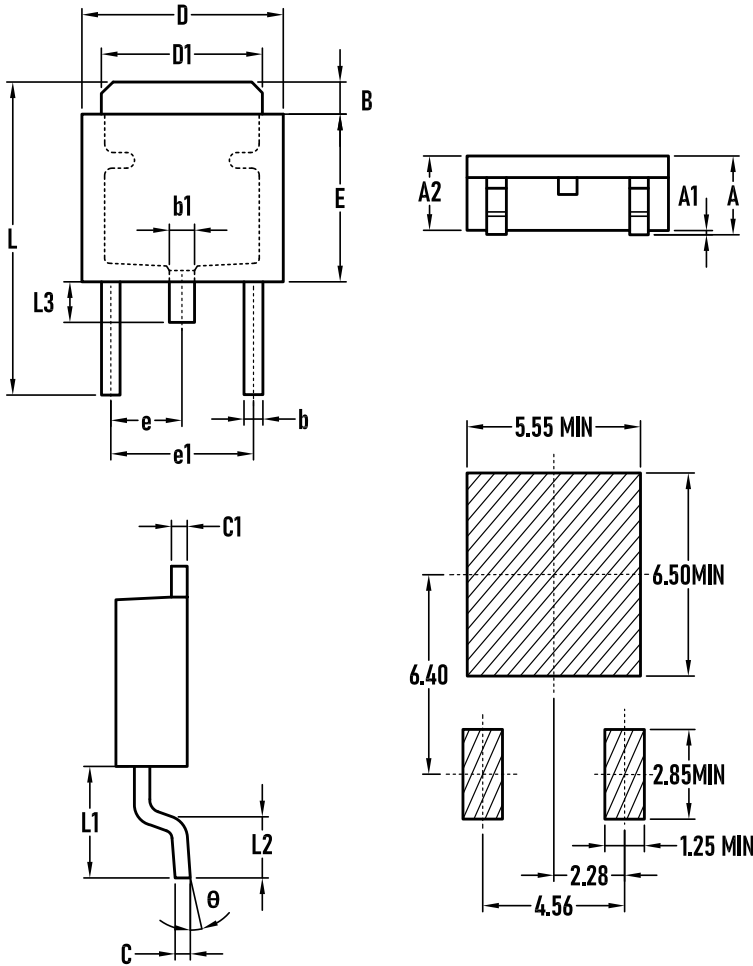
Figure 4: Max Non-Repetitive Surge Current



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Packaging Tape - TO-252-2



SYMBOL	MIN	TYP	MAX
A	2.20	2.35	2.50
A1	0.00	0.05	0.12
A2	2.20	2.30	2.40
B	1.20	1.40	1.60
b	0.50	0.60	0.70
b1	0.70	0.80	0.90
C	0.40	0.50	0.60
C1	0.40	0.50	0.60
D	6.35	6.50	6.65
D1	5.20	5.30	5.40
E	5.40	5.50	5.70
e	2.20	2.30	2.40
e1	4.40	4.60	4.80
L	9.60	9.90	10.20
L1	2.70	2.90	3.10
L2	1.40	1.60	1.80
L3	0.90	1.20	1.50
Θ	0°	4°	8°



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