



STEIF POWER
TECHNOLOGY

MBRD1045CT

Schottky Barrier Rectifier
Reverse Voltage 45 Volts Forward Current 10 Amperes

Features

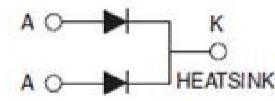
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive center tap
- Metal of silicon rectifier, majority carrier conduction
- Low forward voltage, high efficiency
- Guarding for over voltage protection



Package: TO-252 (DPAK)

Mechanical Data

- Case: Epoxy, Molded
- Weight: 0.4grams(approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 2500 units per reel



Schematic Diagram

Maximum Ratings & Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Test Conditions	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	45	V
Working Peak Reverse Voltage		V_{RWM}	45	V
Maximum DC Blocking Voltage		V_{DC}	45	V
Maximum Vverage Forward Rectified Current at $T_c=105^\circ\text{C}$ Total Device per Diode		$I_F(AV)$	10 5	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load per Diode		I_{FSM}	120	A
Voltage Rate of Change(rated V_R)		Dv/dt	10000	V/us
Peak Repetitive Reverse Current per Leg at $t_p=2.0\mu\text{s}$, 1KHz		I_{RRM}	1.0	A
Operating Junction Temperature Range		T_J	-55 to +150	°C
Storage Temperature Range		T_{STG}	-55 to +150	°C
Isolation Voltage (ITO-220-AB only) from Terminal to Heatsink $t = 1$ sec		V_{AC}	1500	V
Maximum Instantaneous Forward Voltage per Leg	$I_F=5\text{A}$ $T_c=25^\circ\text{C}$ $I_F=5\text{A}$ $T_c=125^\circ\text{C}$	V_F	0.55 0.50	V
Maximum Reverse Current per Leg at Working Peak Reverse Voltage	$T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$	I_R	200 15	uA uA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance, Junction to Case per Leg	$R_{\theta JC}$	3.5	°C /W
Thermal Resistance, Junction to Ambient per Leg	$R_{\theta JA}$	62.5	°C /W

Note: Pulse test:300us pulse width, duty cycle=2%

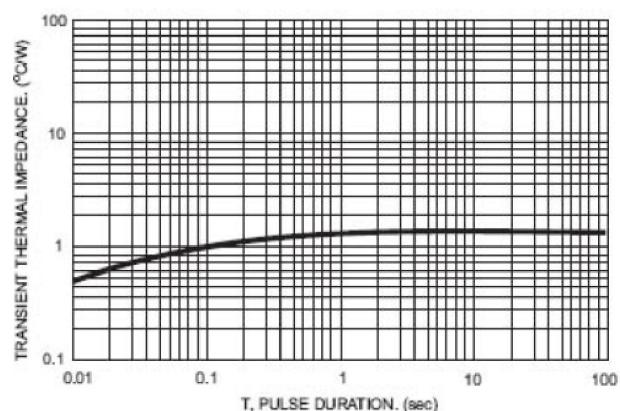
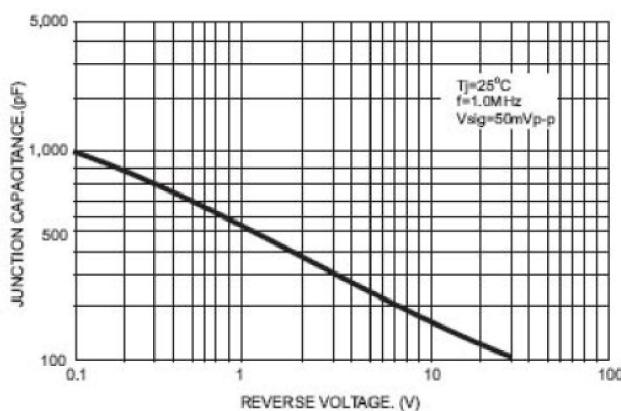
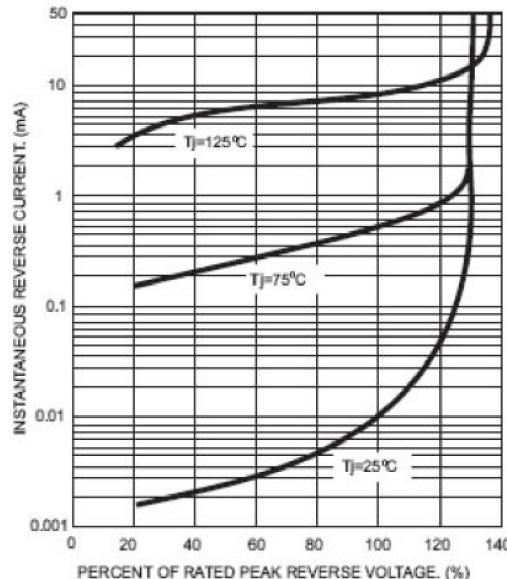
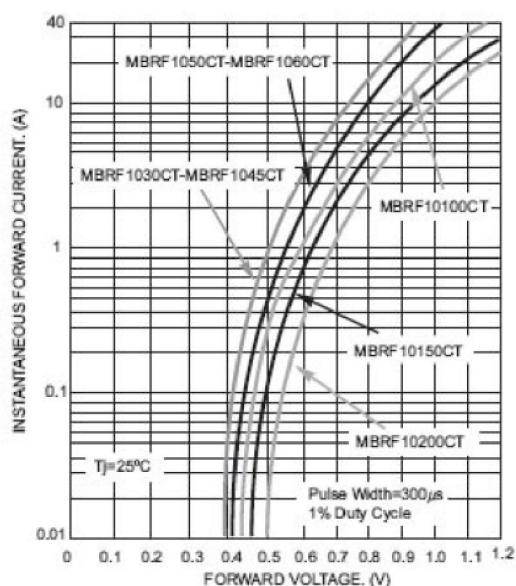
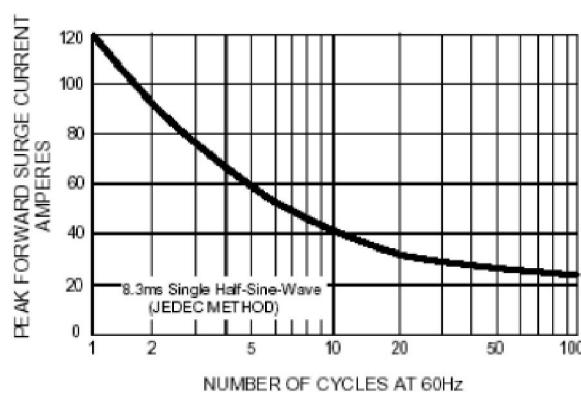
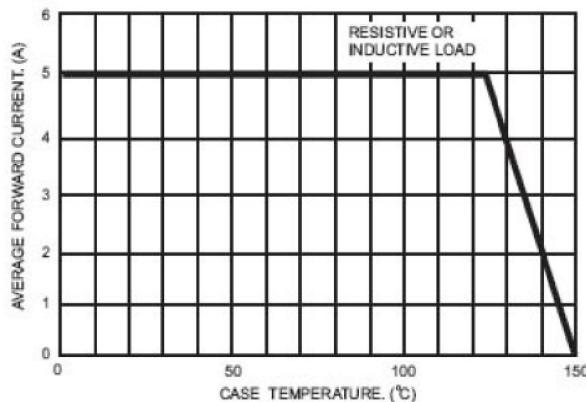


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Typical Characteristics Curves





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Package Outline Dimensions TO-252 (D-PAK)

