

Pb Free Plating Product

MBRS6040CT



60 Amperes, 40 Volts Dual Common Cathode Surface Mount Schottky Rectifiers

Features

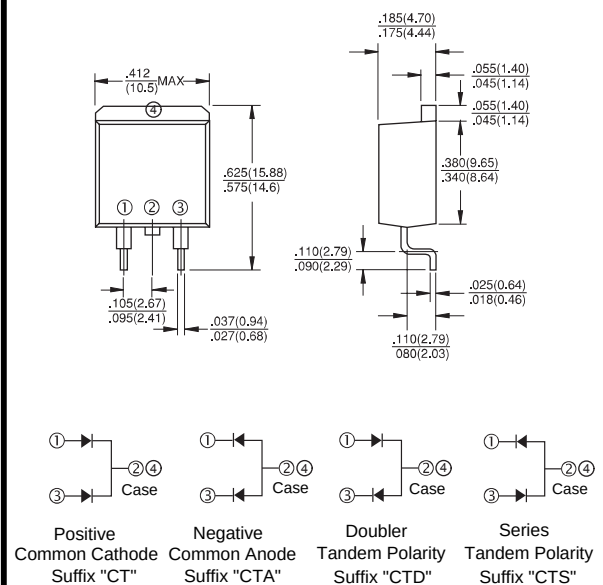
- ✧ For surface mounted application
- ✧ Plastic material used carries Underwriters Laboratory Classifications 94V-0
- ✧ Metal silicon junction, majority carrier conduction
- ✧ Low power loss, high efficiency
- ✧ High current capability, low forward voltage drop
- ✧ High surge capability
- ✧ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ✧ Guardring for overvoltage protection
- ✧ High temperature soldering guaranteed: 260°C/10 seconds at terminals

Mechanical Data

- ✧ Cases: JEDEC D²PAK /TO-263-2L molded plastic
- ✧ Terminals: Pure tin plated, lead free. solderable per MIL-STD-750, Method 2026
- ✧ Polarity: As marked
- ✧ Mounting position: Any
- ✧ Mounting torque: 5 in. - lbs. max
- ✧ Weight: 0.06 ounce, 1.70 gram approximately

D2PAK/TO-263AB

Unit: inch(mm)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	MBRS6040CT	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	40	V
Maximum RMS voltage	V_{RMS}	28	V
Maximum DC blocking voltage	V_{DC}	40	V
Maximum average forward rectified current	$I_{F(AV)}$	60	A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	250	A
Maximum instantaneous forward voltage (Note 1) $I_F = 30\text{A}, T_J=25^\circ\text{C}$ $I_F = 30\text{A}, T_J=125^\circ\text{C}$ $I_F = 60\text{A}, T_J=25^\circ\text{C}$ $I_F = 60\text{A}, T_J=125^\circ\text{C}$	V_F	0.75 0.70 1.05 0.98	V
Maximum reverse current @ rated V_R $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	I_R	0.1 40	mA
Voltage rate of change (Rated V_R)	dV/dt	10000	V/ μs
Typical thermal resistance	$R_{\theta JC}$	1	$^\circ\text{C/W}$
Operating junction temperature range	T_J	- 55 to +150	$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 to +150	$^\circ\text{C}$

Note 1: Pulse test with PW=300 μs , 1% duty cycle

RATINGS AND CHARACTERISTICS CURVES

($T_A=25^{\circ}\text{C}$ unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

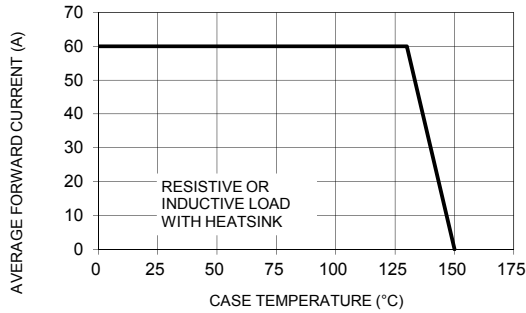


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

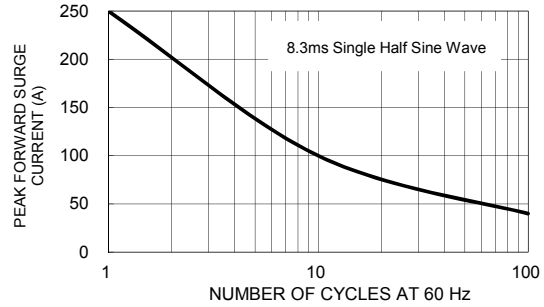


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

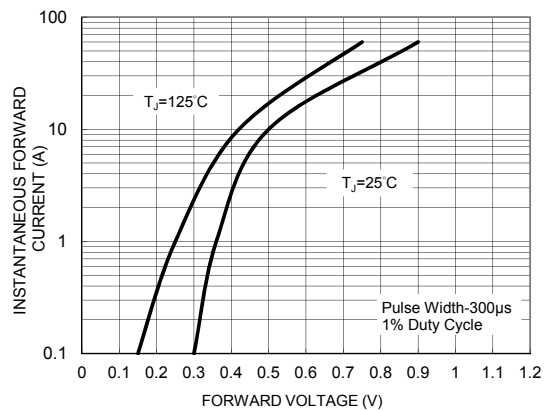


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

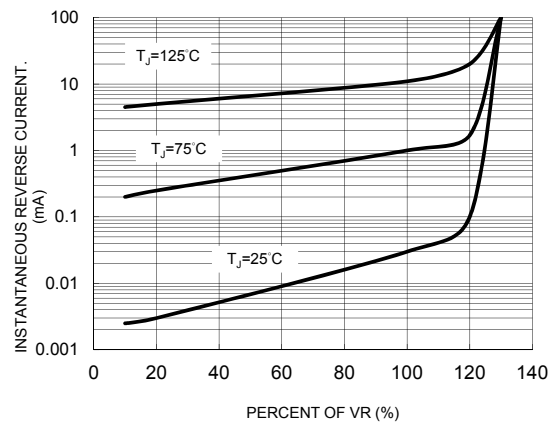


FIG. 5 TYPICAL JUNCTION CAPACITANCE

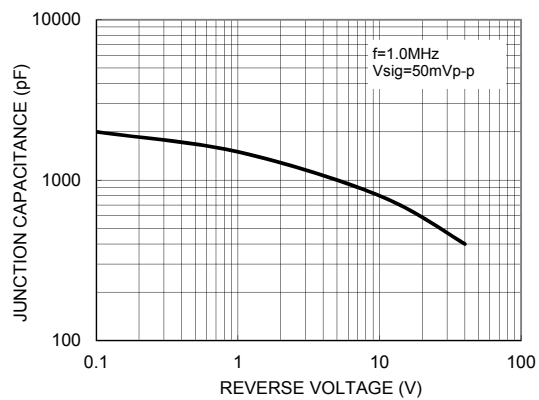


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

