

Pb Free Plating Product

MBRB2045CTG thru MBRB20200CTG



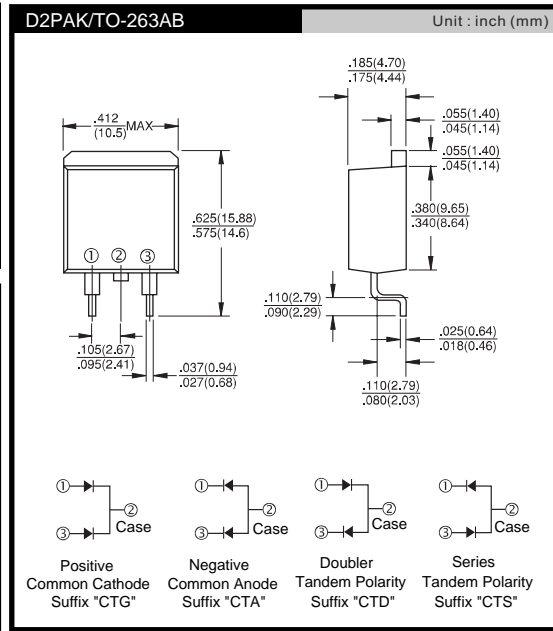
20.0 Ampere Surface Mount Dual Common Cathode Schottky Barrier Rectifiers

**Features**

- ★ ThinkiSemi Planar Schottky Technology
- ★ Good Soft Recovery Characteristics
- ★ Ideally Suited for Automatic Assembly
- ★ Low Forward Voltage
- ★ High Surge Current Capability
- ★ Low Leakage Current

**Applications**

- ★ Freewheeling, Snubber, Clamp
- ★ Inversion Welder
- ★ PFC
- ★ Plating Power Supply
- ★ Ultrasonic Cleaner and Welder
- ★ Converter & Chopper
- ★ UPS/LED SMPS/HID



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)**

PARAMETER	SYMBOL	MBRB 2045 CTG	MBRB 2060 CTG	MBRB 20100 CTG	MBRB 20150 CTG	MBRB 20200 CTG	Unit
Marking code		MBRB 2045CTG	MBRB 2060CTG	MBRB 20100CTG	MBRB 20150CTG	MBRB 20200CTG	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	45	60	100	150	200	V
Maximum RMS voltage	V <sub>RMS</sub>	31	42	70	105	140	V
Maximum DC blocking voltage	V <sub>DC</sub>	45	60	100	150	200	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	20					A
Peak repetitive forward current (Rated VR, Square wave, 20KHz)	I <sub>FRM</sub>	20					A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	150					A
Peak repetitive reverse surge current (Note 1)	I <sub>RRM</sub>	1	0.5				A
Maximum instantaneous forward voltage (Note 2) I <sub>F</sub> =10A, T <sub>J</sub> =25°C I <sub>F</sub> =10A, T <sub>J</sub> =125°C	V <sub>F</sub>	0.70 0.60	0.80 0.70	0.85 0.75	0.99 0.87		V
Maximum reverse current @ rated VR T <sub>J</sub> =25°C T <sub>J</sub> =125°C	I <sub>R</sub>	0.1					mA
		15	10	5			
Voltage rate of change (Rated V <sub>R</sub> )	dV/dt	10000					V/μs
Typical thermal resistance	R <sub>θJC</sub>	1.5			2		°C/W
Operating junction temperature range	T <sub>J</sub>	- 55 to +150					°C
Storage temperature range	T <sub>STG</sub>	- 55 to +150					°C

Note 1: tp = 2.0 μs, 1.0KHz

Note 2: Pulse test with PW=300μs, 1% duty cycle

RATINGS AND CHARACTERISTICS CURVES

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

45V=MBRB2045CTG  
 60V=MBRB2060CTG  
 100V=MBRB20100CTG  
 150V=MBRB20150CTG  
 200V=MBRB20200CTG

FIG. 1 FORWARD CURRENT DERATING CURVE

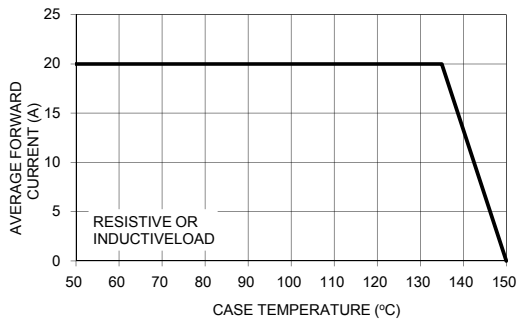


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

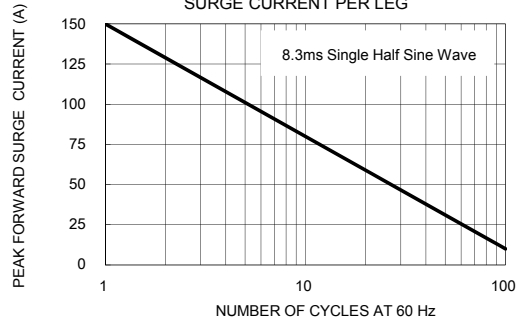


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

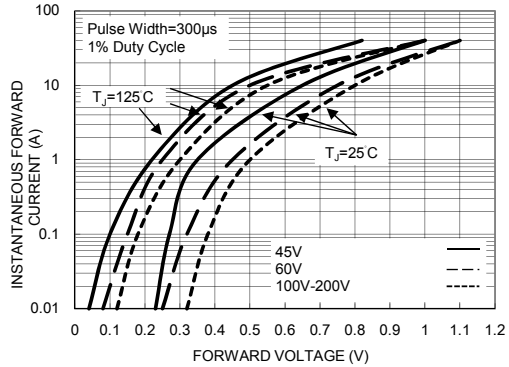


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

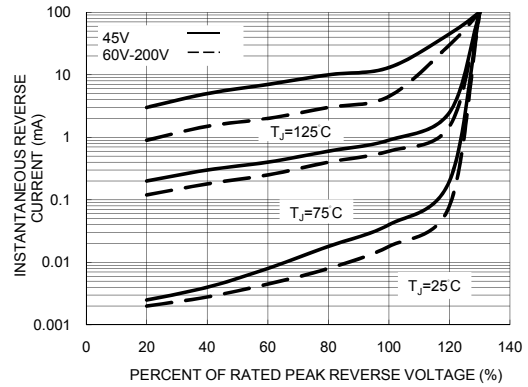


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

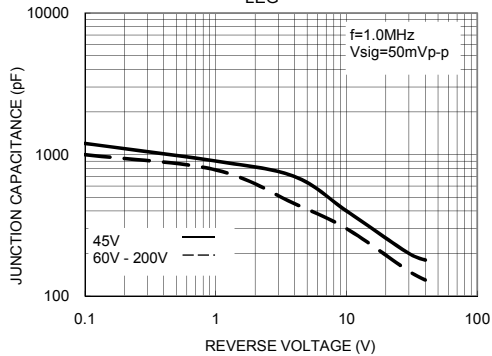


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

