

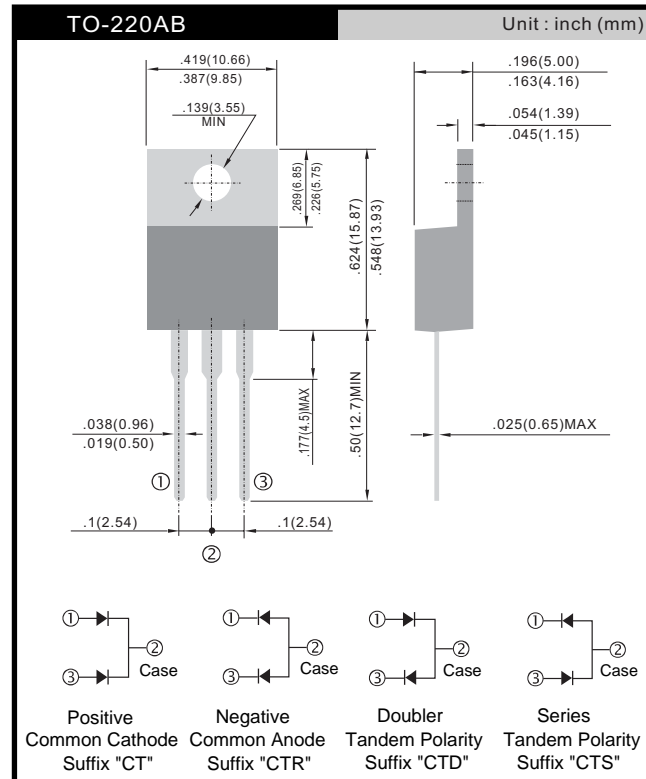
**Pb Free Plating Product**

MBR2045CTR/MBR2060CTR/MBR20100CTR/MBR20200CTR

20 Amperes Heat Sink Dual Common Anode Schottky Half Bridge Rectifiers

- Features**
- ★ Standard MBR matured technology with high reliability
  - ★ Low forward voltage drop
  - ★ High current capability
  - ★ Low reverse leakage current
  - ★ High surge current capability
- Application**
- ★ Automotive Inverters/Solar Inverters
  - ★ Plating Power Supply, SMPS and UPS
  - ★ Car Audio Amplifiers and Sound Device Systems

- Mechanical Data**
- ★ Case: Heatsink TO-220AB
  - ★ Epoxy: UL 94V-0 rate flame retardant
  - ★ Terminals: Solderable per MIL-STD-202 method 208
  - ★ Polarity: As marked on diode body
  - ★ Mounting position: Any
  - ★ Weight: 2.0 gram approximately



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

PARAMETER	SYMBOL	MBR2045CTR	MBR2060CTR	MBR20100CTR	MBR20200CTR	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	45	60	100	200	V
Maximum RMS voltage	V <sub>RMS</sub>	31	42	70	140	V
Maximum DC blocking voltage	V <sub>DC</sub>	45	60	100	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 I <sub>F</sub> =20A, T <sub>J</sub> =25°C I <sub>F</sub> =20A, T <sub>J</sub> =125°C	V <sub>F</sub>	- 0.57 0.84 0.72	0.80 0.70 0.95 0.85	0.85 0.75 0.95 0.85	0.99 0.87 1.23 1.10	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	0.15	
Voltage rate of change (Rated V <sub>R</sub> )	dV/dt	10000				V/μs
Typical thermal resistance	R <sub>θJC</sub>	1.0		2.0		°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

(TA=25°C unless otherwise noted)

FIG. 1- FORWARD CURRENT DERATING CURVE

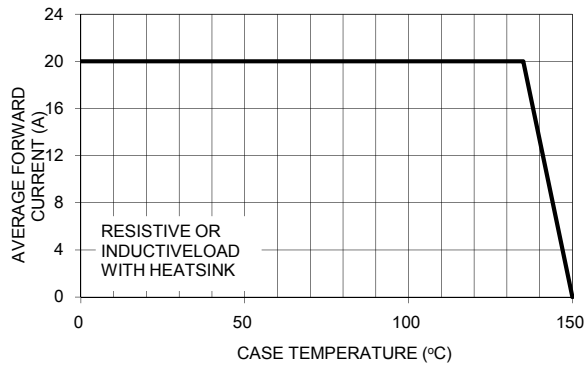


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

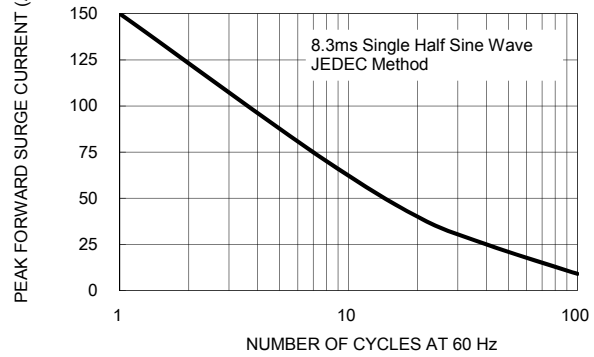


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

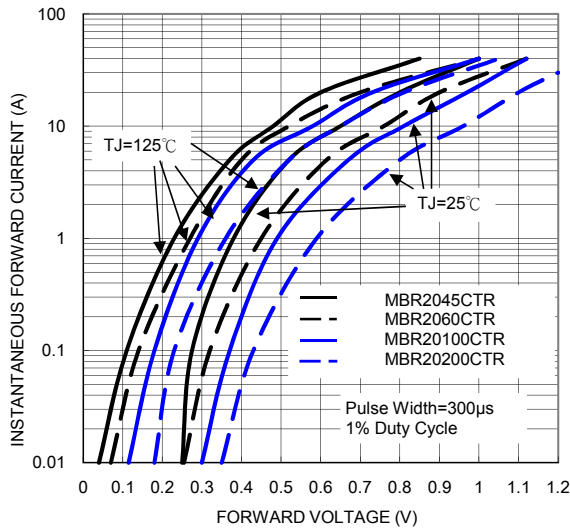


FIG. 4- TYPICAL REVERSE CHARACTERISTICS PER LEG

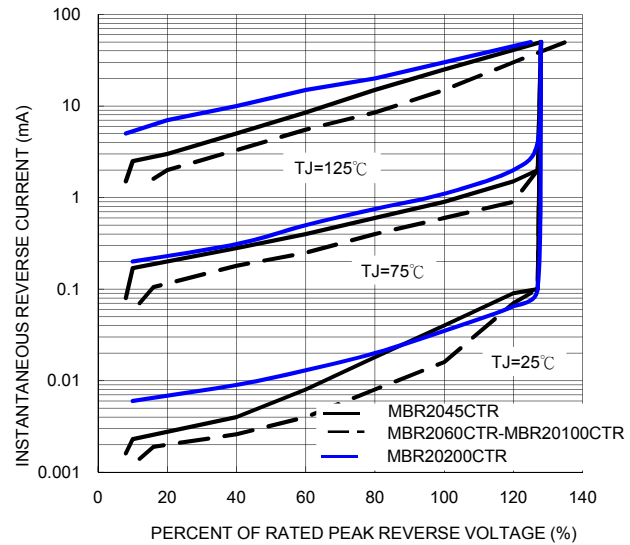


FIG. 5- TYPICAL JUNCTION CAPACITANCE PER LEG

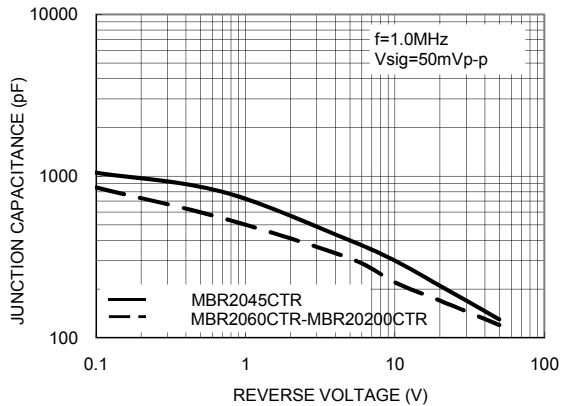


FIG. 6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

