Pb Free Plating Product

MBR3035CTR thru MBR30200CTR

30.0 Amperes Heatsink Dual Common Anode Schottky Half Bridge Rectifiers

Features

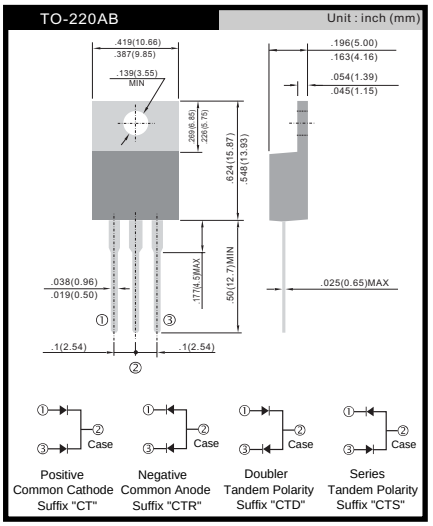
- Standard MBR matured technology with high reliablity
- Low forward voltage drop
- High current capability
- Low reverse leakage current
- High surge current capability

Application

- Automotive Inverters/Solar Inverters
- Plating Power Supply,SMPS and UPS
- Car Audio Amplifiers and Sound Device Systems

Mechanical Data

- Case: Heatsink TO-220AB open type
- 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_A=25℃ unless otherwise noted)

PARAMETER	SYMBOL	MBR 3035 CTR	MBR 3045 CTR	MBR 3050 CTR	MBR 3060 CTR	MBR 3090 CTR	MBR 30100 CTR	MBR 30150 CTR	MBR 30200 CTR	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	35	45	50	60	90	100	150	200	V
Maximum RMS voltage	V_{RMS}	24	31	35	42	63	70	105	140	V
Maximum DC blocking voltage	V_{DC}	35	45	50	60	90	100	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	30								A
Peak repetitive forward current (Rated VR, Square wave, 20KHz)	I_{FRM}	30								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	200								A
Peak repetitive reverse surge current (Note 1)	I_{RRM}	1			0.5					A
Maximum instantaneous forward voltage (Note 2) I_F=15A, T_J=25℃ I_F=15A, T_J=125℃ I_F=30A, T_J=25℃ I_F=30A, T_J=125℃	V_F	 0.70 0.60 0.82 0.73		0.75 0.65 0.90 0.78		0.84 0.70 0.94 0.82		0.95 0.80 1.05 0.92		V
Maximum reverse current @ rated VR T_J=25 ℃ T_J=125 ℃	I_R	0.2 20		15		10				mA
Voltage rate of change (Rated V_R)	dV/dt	10000								V/μs
Typical thermal resistance	$R_{\theta JC}$	1.5								℃/W
Operating junction temperature range	T_J	- 55 to +150								℃
Storage temperature range	T_{STG}	- 55 to +150								℃

Note 1: tp = 2.0 μs, 1.0KHz

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

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RATINGS AND CHARACTERISTICS CURVES

(TA=25℃ unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

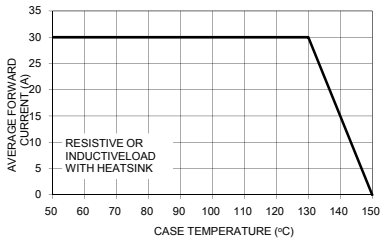


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

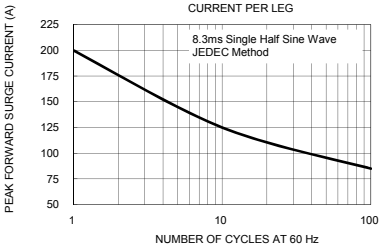


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

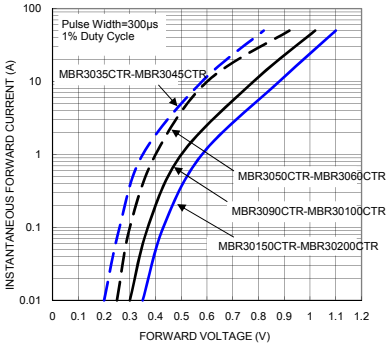


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

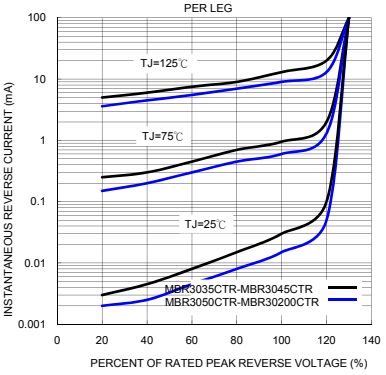


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

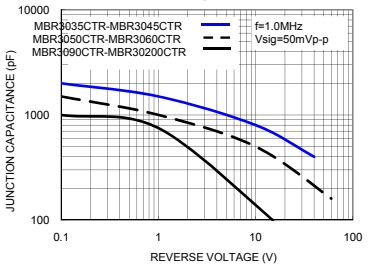
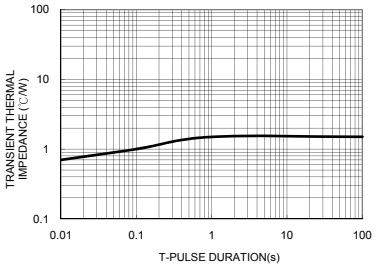


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



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