Pb Free Plating Product

MBRF3035CTR thru MBRF30200CTR

30.0 Amperes Insulated 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

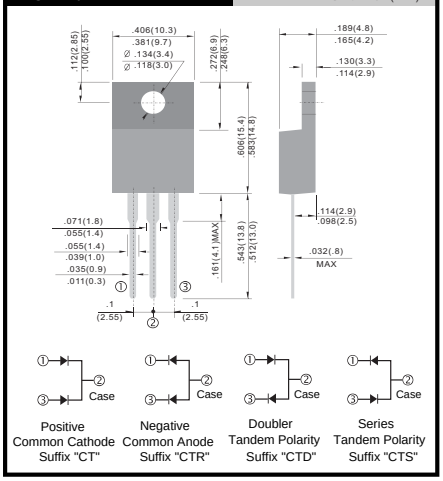
Application

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

Mechanical Data

- Case: Fully Isolated Molding TO-220F Full Plastic Pak
- 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

ITO-220AB Unit : inch (mm)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted)

PARAMETER	SYMBOL	MBRF 3035 CTR	MBRF 3045 CTR	MBRF 3050 CTR	MBRF 3060 CTR	MBRF 3090 CTR	MBRF 30100 CTR	MBRF 30150 CTR	MBRF 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	$R_{\theta JC}$	4								℃/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

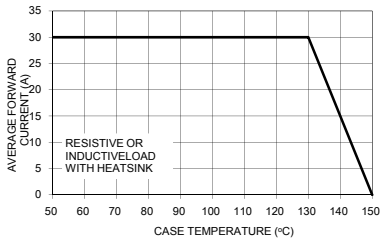


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

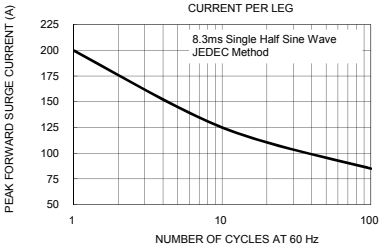


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

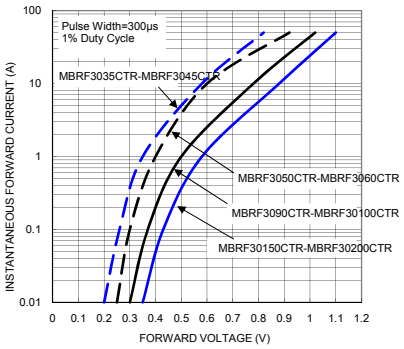


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

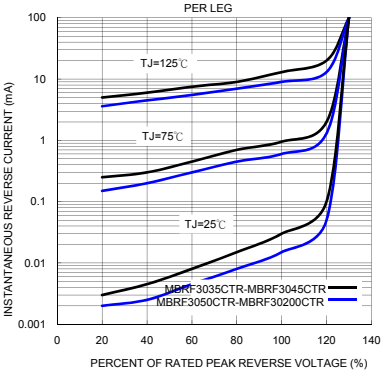


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

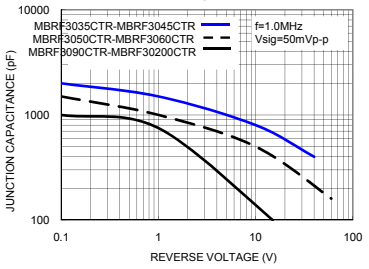
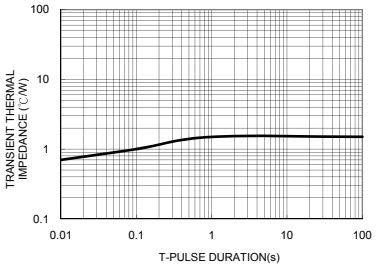


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



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