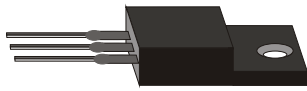


# MBRF2035CT THRU MBRF20200CT

## Dual Common Cathode Schottky Rectifier



### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability
- \* Good for switching mode application

### MECHANICAL DATA

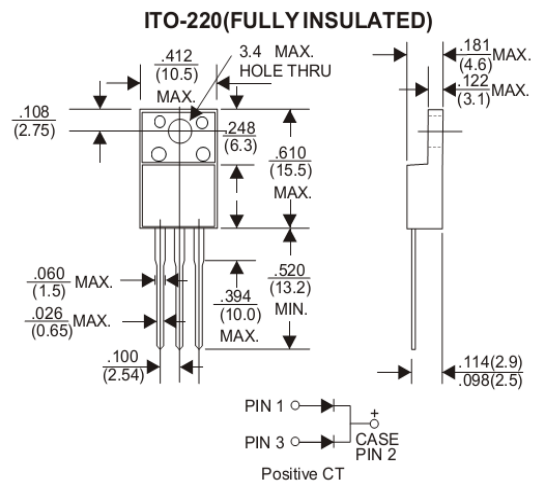
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Lead solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: As Marked
- \* Mounting position: Any
- \* Weight: 1.69 grams

### VOLTAGE RANGE

35-200V

### CURRENT

20.0 Ampere



Dimensions in inches and (millimeters)

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

PARAMETER	SYMBOL	MBRF	MBRF	MBRF	MBRF	MBRF	MBRF	MBRF	MBRF	MBRF	UNIT
		2035	2045	2050	2060	2080	2090	20100	20150	20200	
		CT	CT	CT	CT	CT	CT	CT	CT	CT	
Maximum repetitive peak reverse voltage	$V_{RRM}$	35	45	50	60	80	90	100	150	200	V
Maximum RMS voltage	$V_{RMS}$	24	31	35	42	56	63	70	105	140	V
Maximum DC blocking voltage	$V_{DC}$	35	45	50	60	80	90	100	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	20									A
Peak repetitive forward current (Rated VR, Square wave, 20KHz)	$I_{FRM}$	20									A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	150									A
Peak repetitive reverse surge current (Note 1)	$I_{RRM}$	1			0.5						A
Maximum instantaneous forward voltage (Note 2) $I_F=10\text{ A}, T_J=25^\circ\text{C}$ $I_F=10\text{ A}, T_J=125^\circ\text{C}$ $I_F=20\text{ A}, T_J=25^\circ\text{C}$ $I_F=20\text{ A}, T_J=125^\circ\text{C}$	$V_F$	0.80	0.80	0.80	0.85	0.95	0.85	0.95	1.05	0.95	V
Maximum reverse current @ rated VR $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	$I_R$	0.1									mA
		15	10	30	5	2					
Voltage rate of change (Rated $V_R$ )	$dV/dt$	10000									V/ $\mu\text{s}$
Isolation voltage from terminals to heatsink with $t=1.0\text{ min}$	$V_{AC}$	1500									V
Typical thermal resistance	$R_{\theta JC}$	1.5			3.5						$^\circ\text{C/W}$
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:  $t_p = 2.0\ \mu\text{s}$ , 1.0KHz

Note 2: Pulse test with  $PW=300\ \mu\text{s}$ , 1% duty cycle

# MBRF2035CT THRU MBRF20200CT



## 20.0 A Switchmode Power Rectifiers

### RATINGS AND CHARACTERISTIC CURVES (MBRF2035CT THRU MBRF20200CT)

#### RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

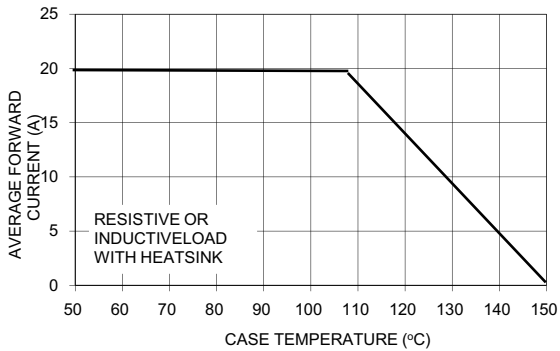


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

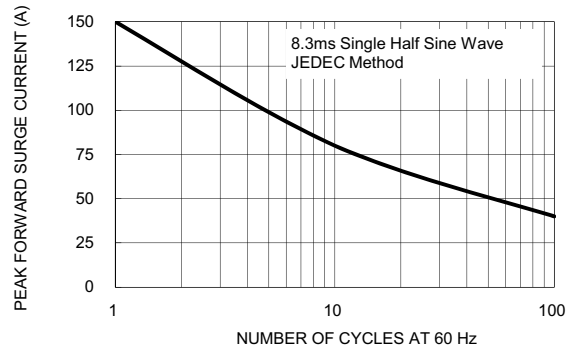


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

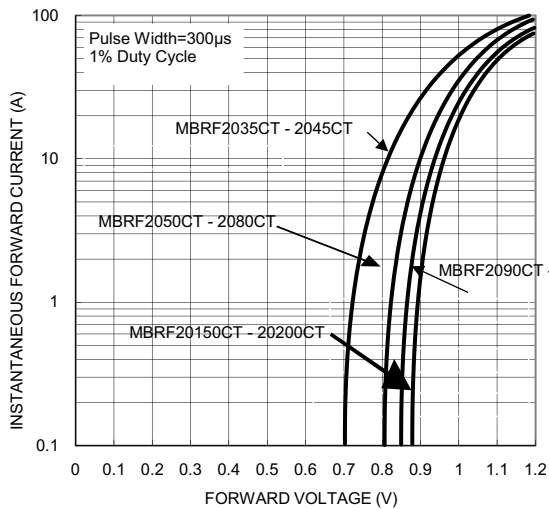


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

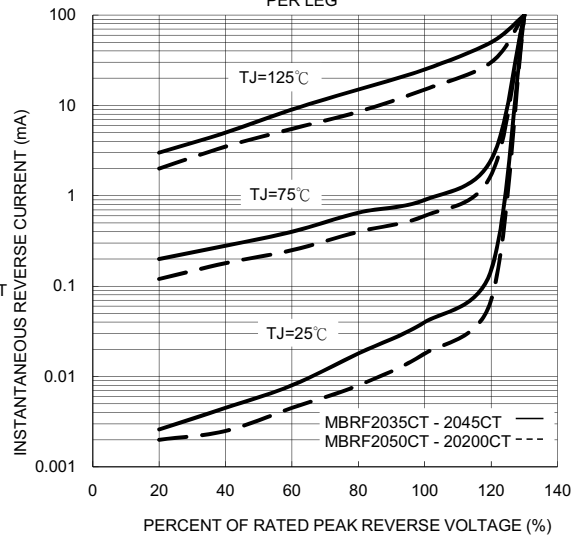


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

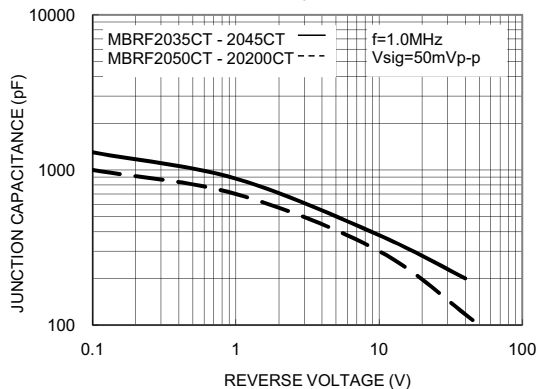


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

