

MBR3020(F)CT~MBR30200(F)CT 30.0Amp Schottky Barrier Rectifiers

Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C,MAX. for 10 seconds

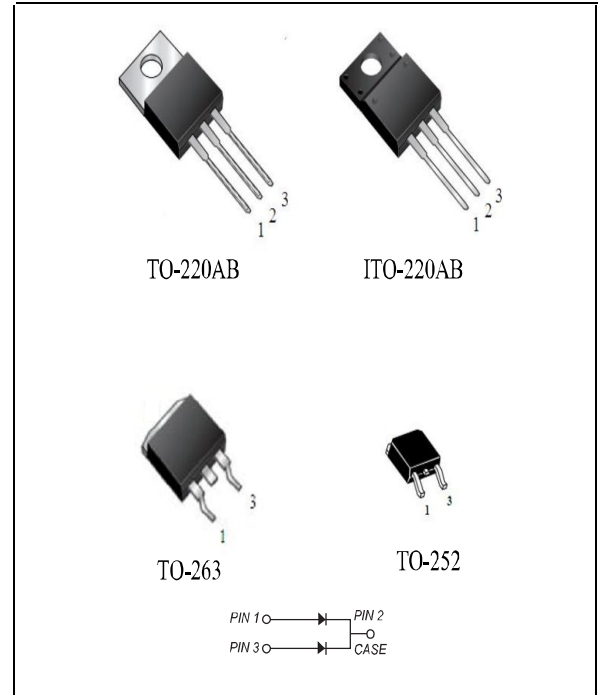
Mechanical Data

Case: (I)TO-220AB,TO-263,TO-252 molded plastic body

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: As marked

Mounting Position: Any



Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	MBR 3020(F)CT	MBR 3040(F)CT	MBR 3045(F)CT	MBR 3060(F)CT	MBR 30100(F)CT	MBR 30150(F)CT	MBR 30200(F)CT	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	20	40	45	60	100	150	200	VOLTS
Maximum RMS voltage	V_{RMS}	14	28	32	42	70	105	140	VOLTS
Maximum DC blocking voltage	V_{DC}	20	40	45	60	100	150	200	VOLTS
Maximum average forward rectified current (see fig.1)	$I_{(AV)}$	30.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	200.0							Amps
Maximum instantaneous forward voltage at 15.0A	V_F	0.55	0.60	0.70	0.85	0.95		Volts	
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R	0.15			0.1		20.0		mA
Typical junction capacitance (NOTE 1)	C_J	800			350		pF		
Typical thermal resistance (NOTE 2)	$R_{\theta JC}$	23							$^\circ\text{C/W}$
Operating junction temperature range	T_J	-55 to +125			-55 to +150				$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150							$^\circ\text{C}$

Note:1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2.Thermal resistance from junction to case

Ratings And Characteristic Curves

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FIG. 1- FORWARD CURRENT DERATING CURVE

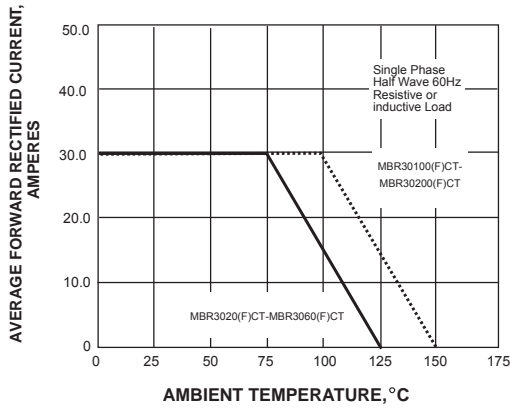


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

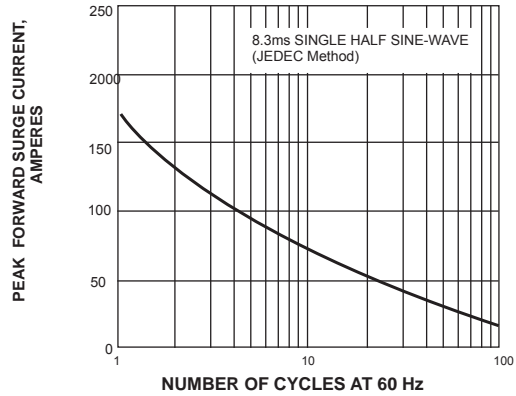


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

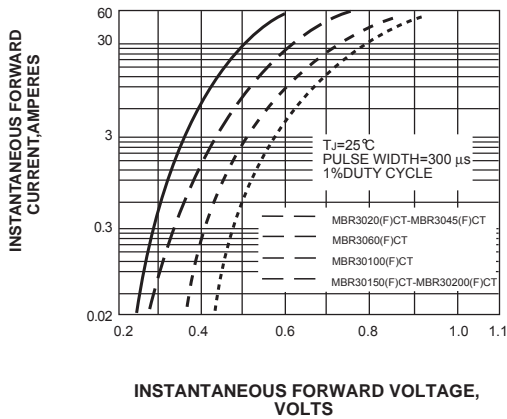


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

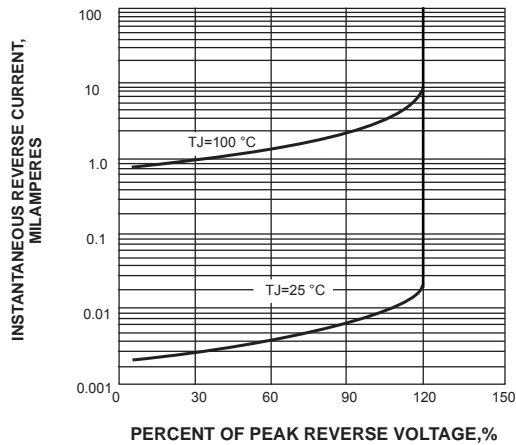


FIG. 5-TYPICAL JUNCTION CAPACITANCE

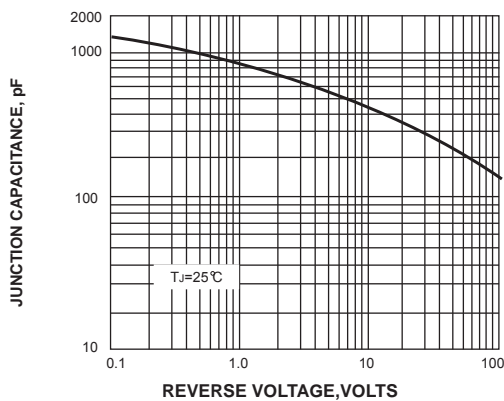
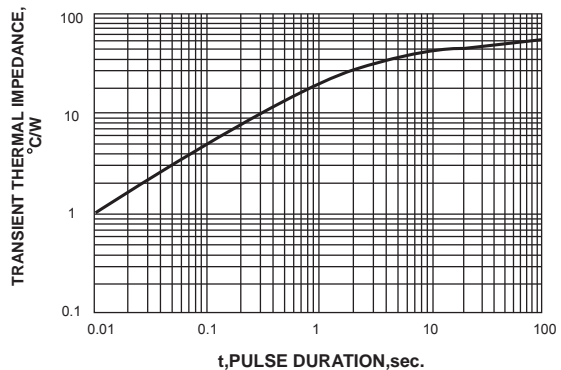
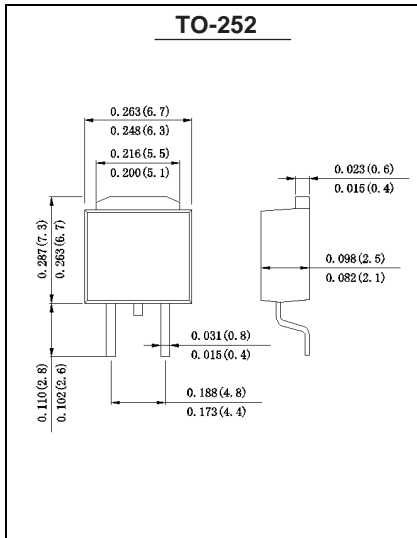
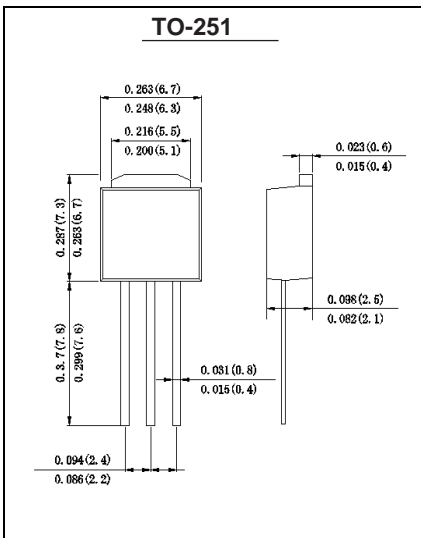
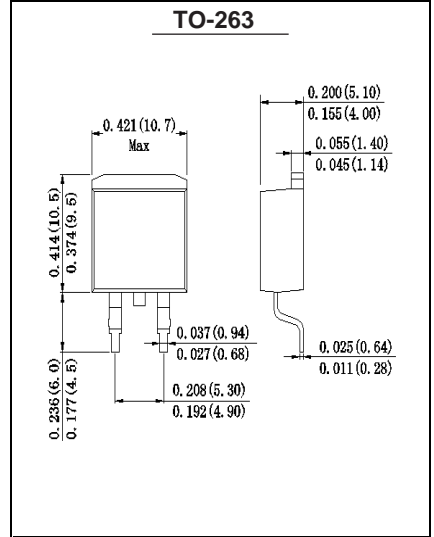
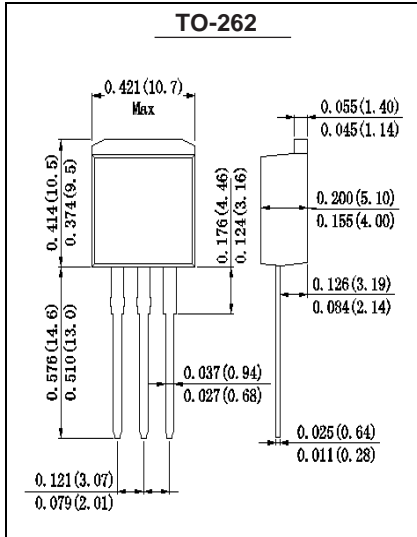
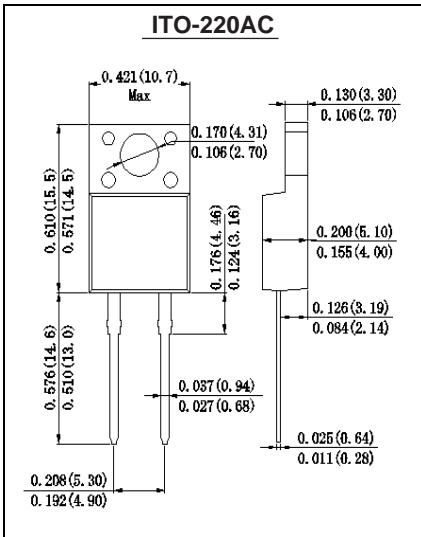
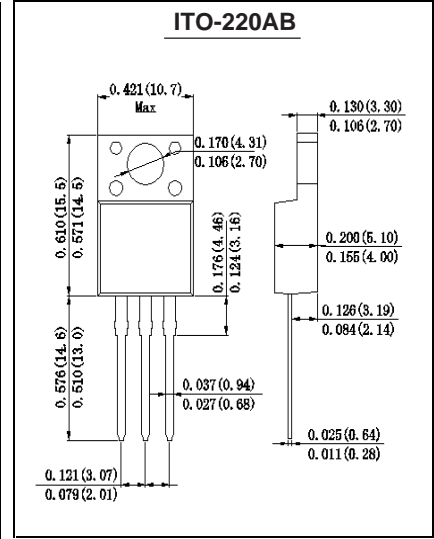
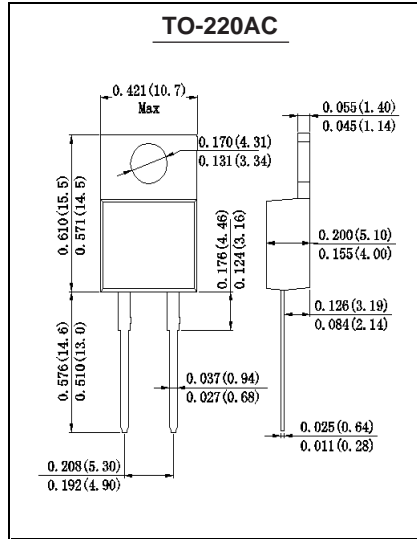
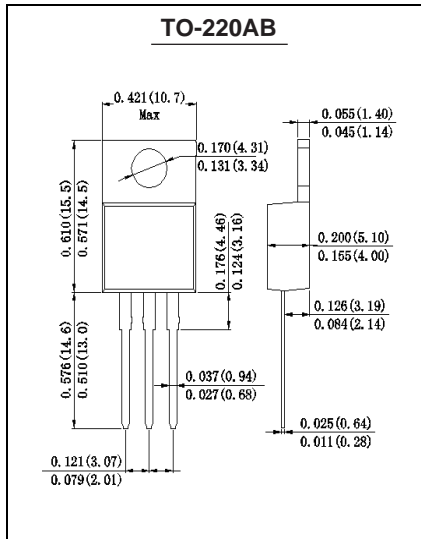


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Outline Drawing



Note: All dimensions in inches and (millimeters)