

MBR1020(F)~MBR10200(F) 10.0Amp 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

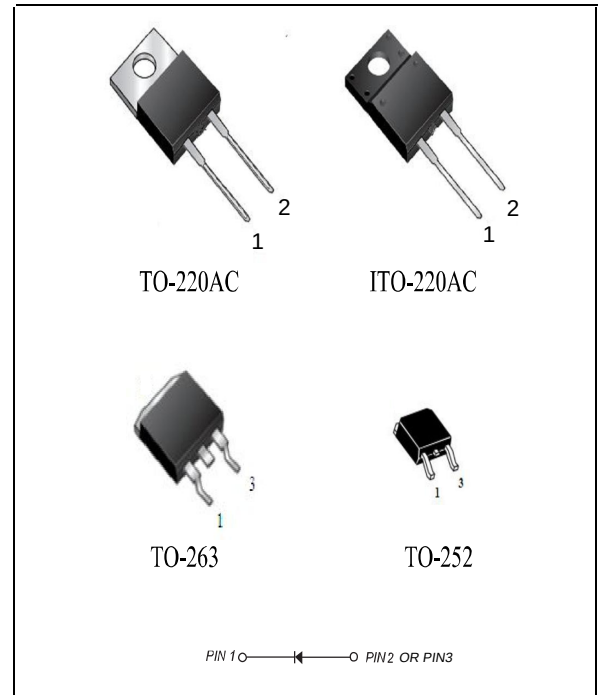
Mechanical Data

Case: (I)TO-220AC,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 1020(F)	MBR 1040(F)	MBR 1045(F)	MBR 1060(F)	MBR 10100(F)	MBR 10150(F)	MBR 10200(F)	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)	10.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	150.0							Amps
Maximum instantaneous forward voltage at 10.0A	V _F	0.55	0.60		0.70	0.85	0.95		Volts
Maximum DC reverse current T _A =25°C	I _R	0.15				0.1			mA
at rated DC blocking voltage T _A =100°C		40.0				20.0			
Typical junction capacitance (NOTE 1)	C _J	550				150			pF
Typical thermal resistance (NOTE 2)	R _{θJC}	28							°C/W
Operating junction temperature range	T _J	-55 to +125				-55 to +150			°C
Storage temperature range	T _{STG}	-55 to +150							°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

MBR1020(F)~MBR10200(F)

FIG. 1- FORWARD CURRENT DERATING CURVE

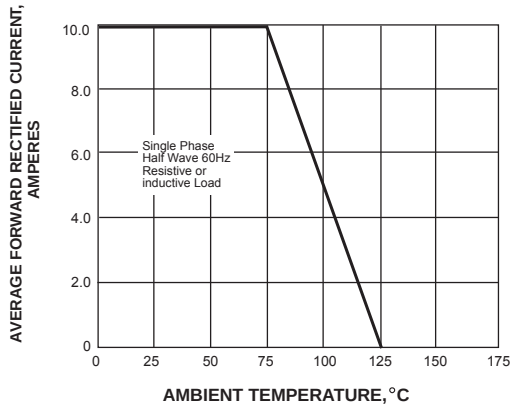


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

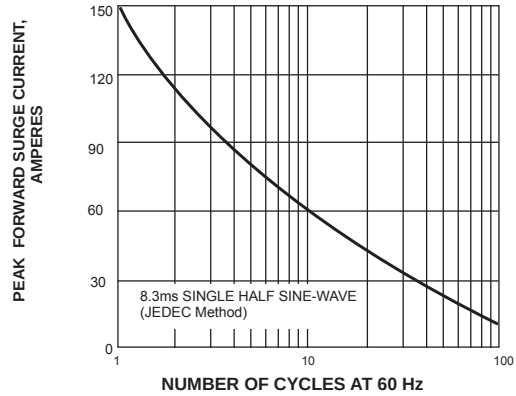


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

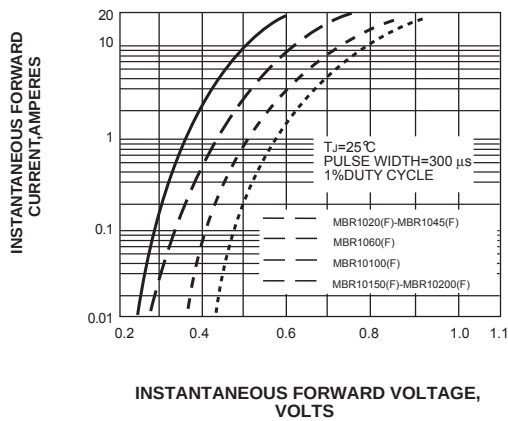


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

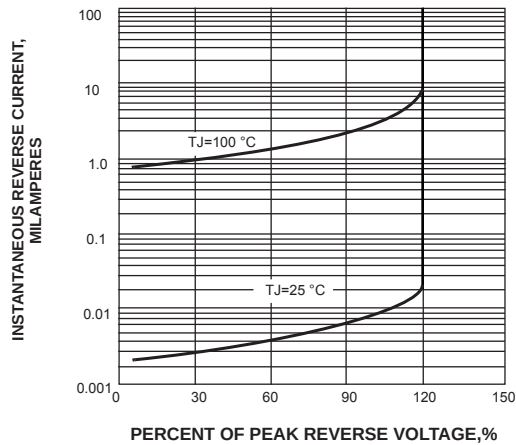


FIG. 5-TYPICAL JUNCTION CAPACITANCE

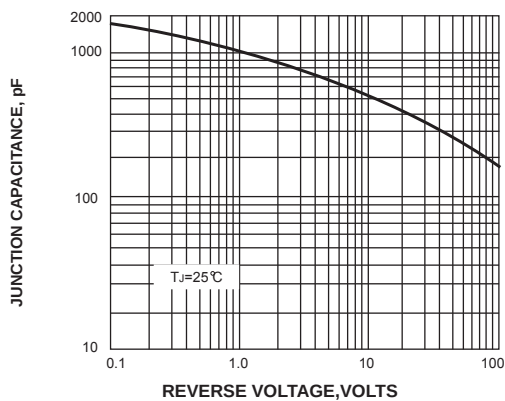
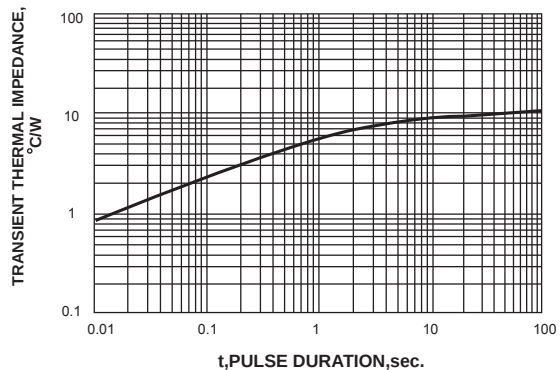
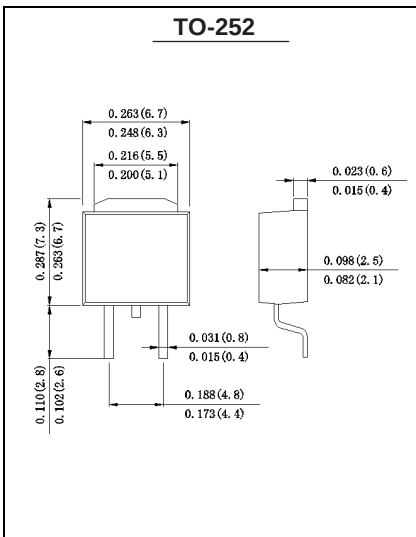
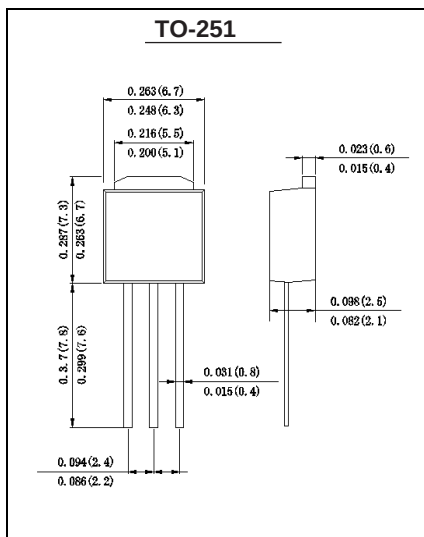
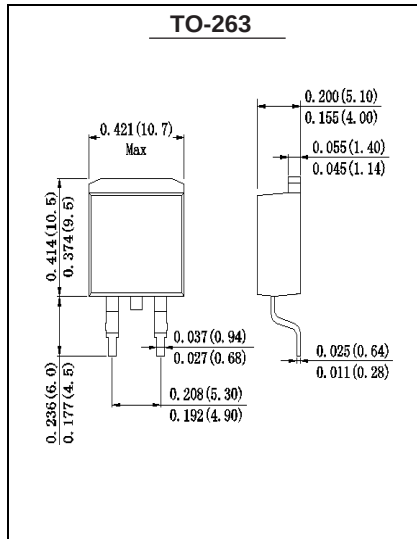
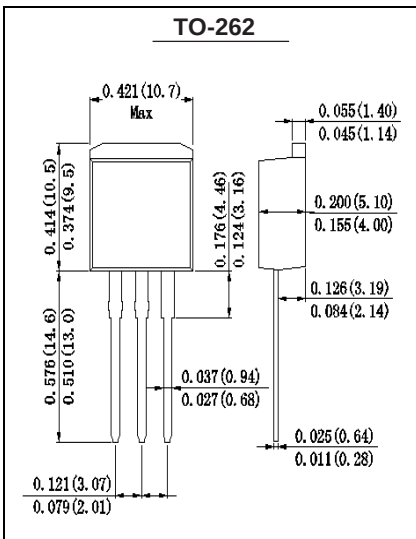
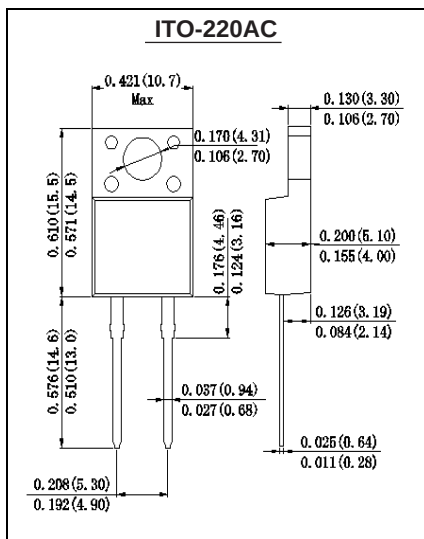
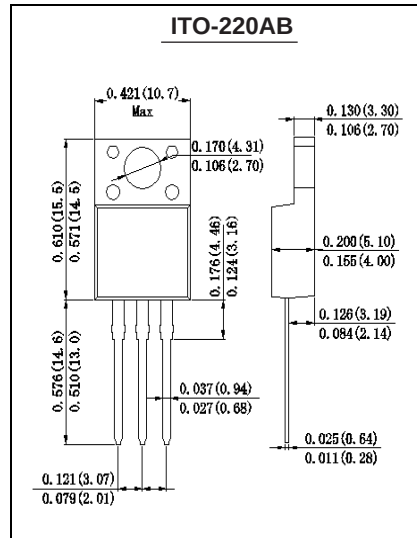
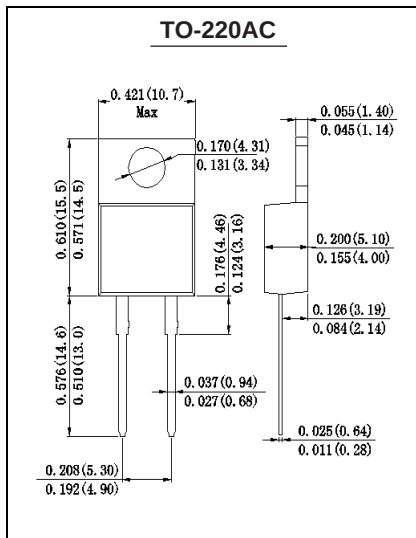
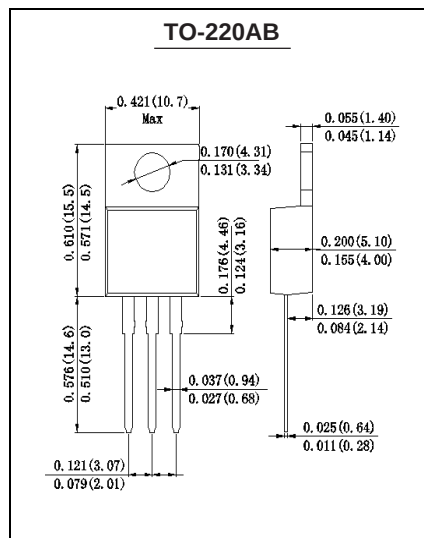


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Outline Drawing



Note: All dimensions in inches and (millimeters)