

VOLTAGE RANGE

45 to 200 Volts

CURRENT

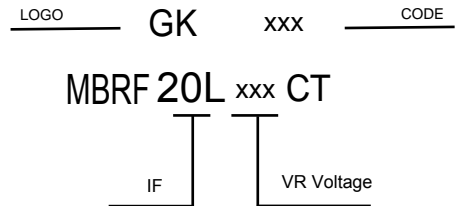
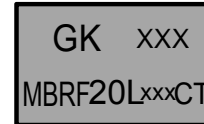
20.0 Amperes

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: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

TYPE NUMBER	MBRF20L45CT	MBRF20L60CT	MBRF20L100CT	MBRF20L150CT	MBRF20L200CT	UNITS
Maximum Recurrent Peak Reverse Voltage	45	60	100	150	200	V
Maximum RMS Voltage	45	60	100	150	200	V
Maximum DC Blocking Voltage	32	42	70	105	140	V
Maximum Average Forward Rectified Current	20					A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	200					A
Maximum Instantaneous Forward Voltage at 20A	0.46	0.55	0.7	0.85		V
Maximum DC Reverse Current $T_a=25^\circ\text{C}$	0.2					mA
at Rated DC Blocking Voltage $T_a=100^\circ\text{C}$	50					mA
Typical Junction Capacitance (Note1)	500					pF
Typical Thermal Resistance $R_{\theta\text{JC}}$ (Note 2)	2.5					$^\circ\text{C/W}$
Operating Temperature Range T_j	-65 — +150					$^\circ\text{C}$
Storage Temperature Range T_{stg}	-65 — +150					$^\circ\text{C}$

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Case.

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

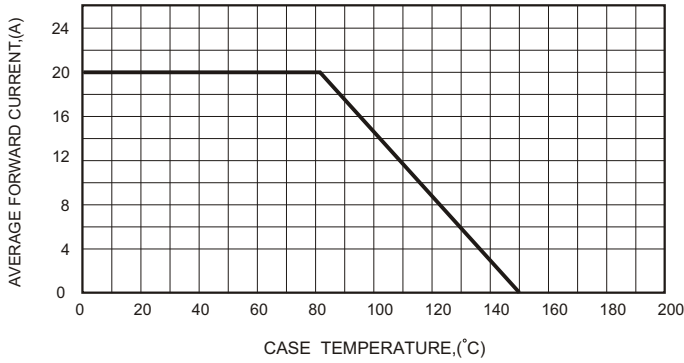


FIG.2-TYPICAL FORWARD CHARACTERISTICS

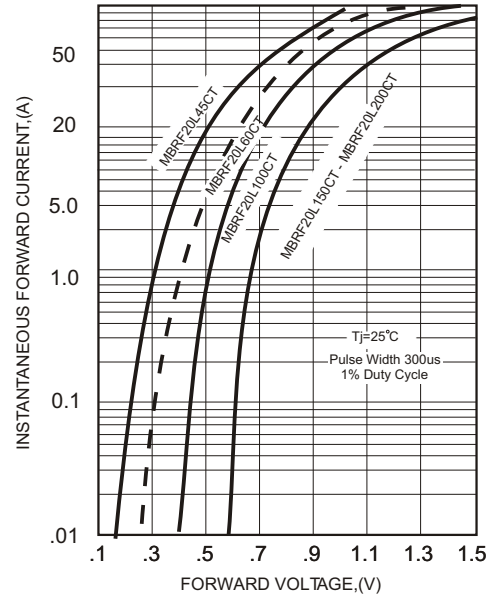


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

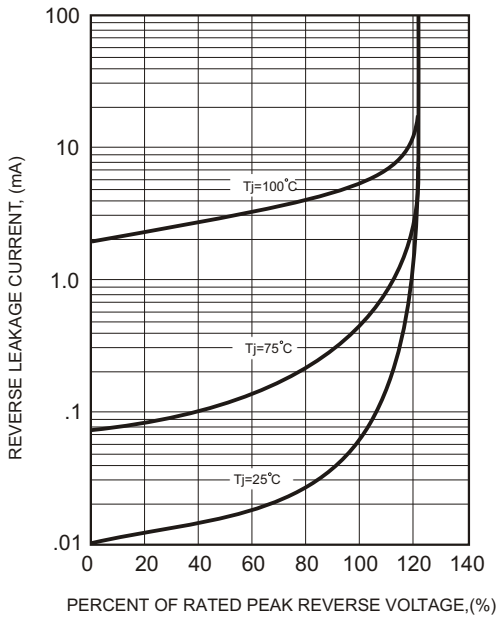


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

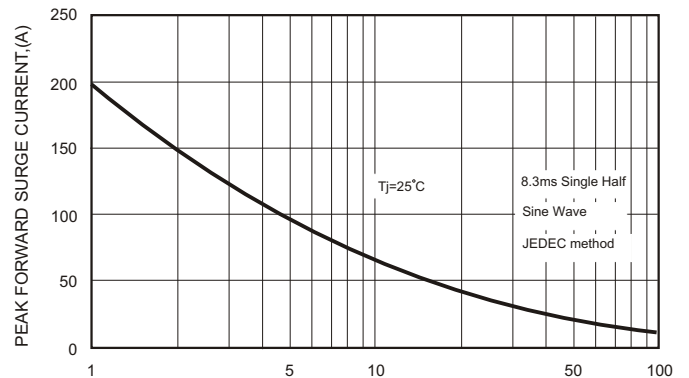
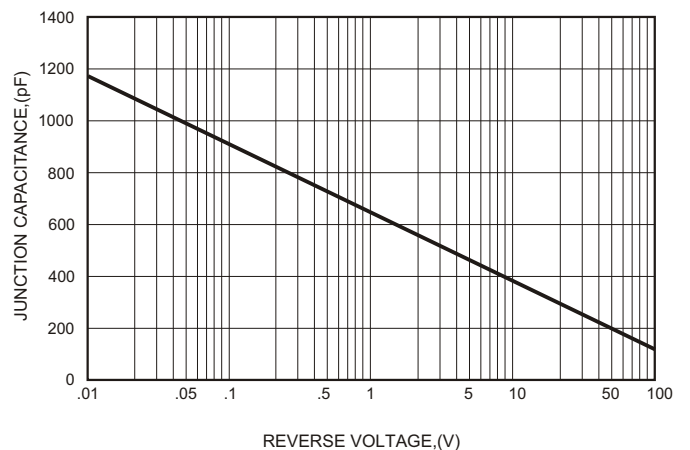


FIG.5-TYPICAL JUNCTION CAPACITANCE



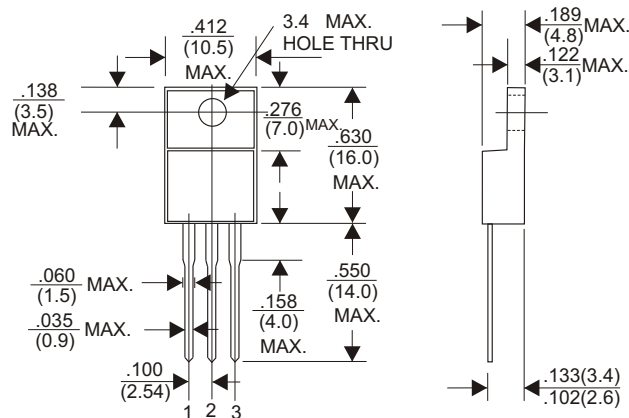
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150 °C
	-Temperature Max ($T_{s(max)}$)	+200 °C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3 °C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3 °C/sec. Max
Reflow	-Temperature (T_L) (Liquid us)	+217 °C
	-Temperature (t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5) °C
Time within 5 °C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25 °C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260 °C



Package Dimensions & Suggested Pad Layout

ITO-220F (FULLY INSULATED)



Dimensions in inches and (millimeters)