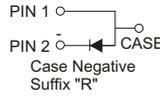
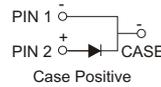


FEATURES

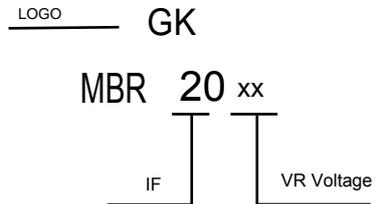
- * Low forward voltage drop
- * High current capability
- * High reliability
- * High surge current capability
- * Good for switching mode application

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



VOLTAGE RANGE
20 to 200 Volts
CURRENT
20.0 Ampere



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	MBR2020	MBR2045	MBR2060	MBR2080	MBR20100	MBR20150	MBR20200	UNITS
Maximum Recurrent Peak Reverse Voltage	20	45	60	80	100	150	200	V
Maximum RMS Voltage	14	32	42	56	70	105	140	V
Maximum DC Blocking Voltage	20	45	60	80	100	150	200	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	0.6	0.7	0.85		0.92			V
Maximum DC Reverse Current $T_a=25^\circ\text{C}$	0.1		0.02					mA
at Rated DC Blocking Voltage $T_a=100^\circ\text{C}$	5		2					mA
Typical Junction Capacitance (Note1)	500							pF
Typical Thermal Resistance $R_{\theta JC}$ (Note 2)	2.5							$^\circ\text{C}/\text{W}$
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

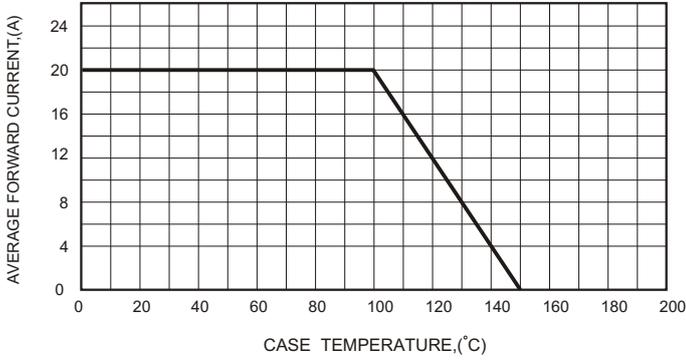


FIG.2-TYPICAL FORWARD CHARACTERISTICS

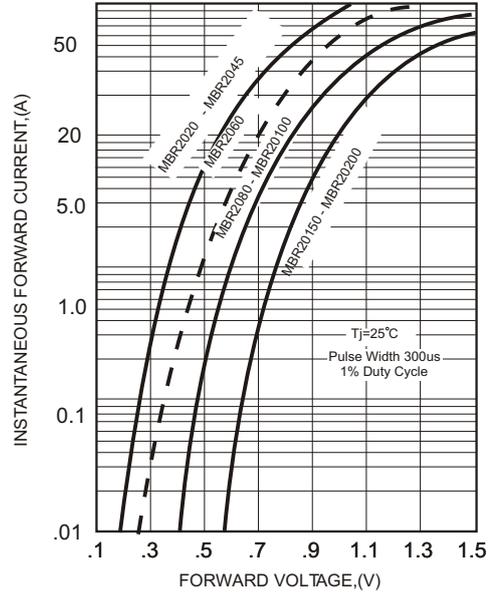


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

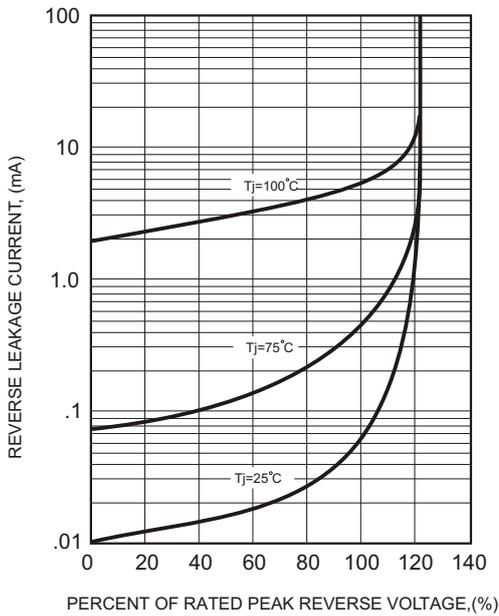


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

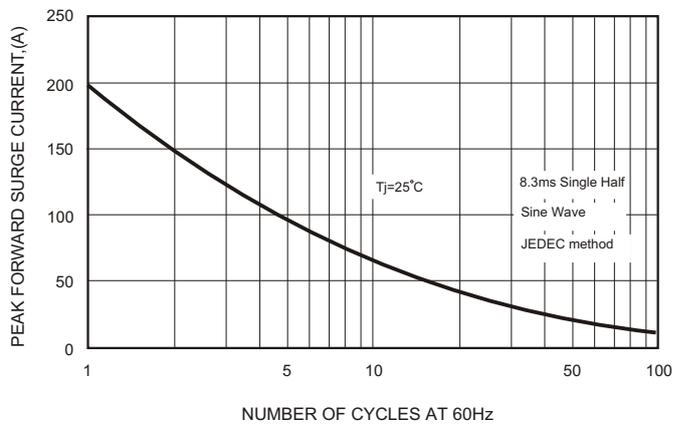
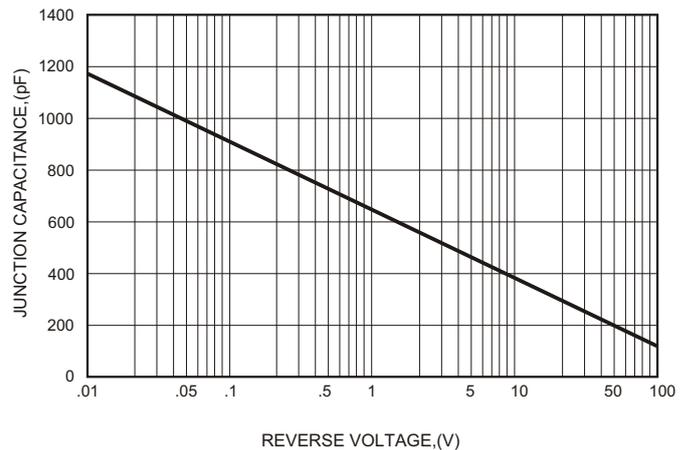


FIG.5-TYPICAL JUNCTION CAPACITANCE



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

