

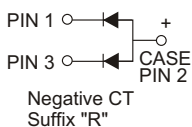
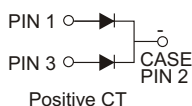


FEATURES

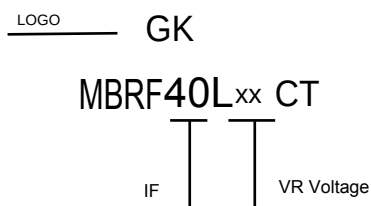
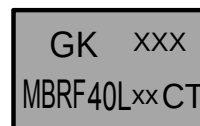
- * Low forward voltage drop
- * High current capability
- * High reliability
- * High surge current capability
- * Good for switching mode application

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
45 to 200 Volts
CURRENT
40.0 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	MBRF40L45CT	MBRF40L60CT	MBRF40L100CT	UNITS
Maximum Recurrent Peak Reverse Voltage	45	60	100	V
Maximum RMS Voltage	45	60	100	V
Maximum DC Blocking Voltage	32	42	70	V
Maximum Average Forward Rectified Current	40			A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	300			A
Maximum Instantaneous Forward Voltage at 40A	0.47	0.55	0.7	V
Maximum DC Reverse Current Ta=25°C	0.2		0.1	mA
at Rated DC Blocking Voltage Ta=100°C	20		10	mA
Typical Junction Capacitance (Note1)	580			pF
Typical Thermal Resistance RθJC (Note 2)	2.5			°C/W
Operating Temperature Range Tj	-65 — +150			°C
Storage Temperature Range Tstg	-65 — +150			°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

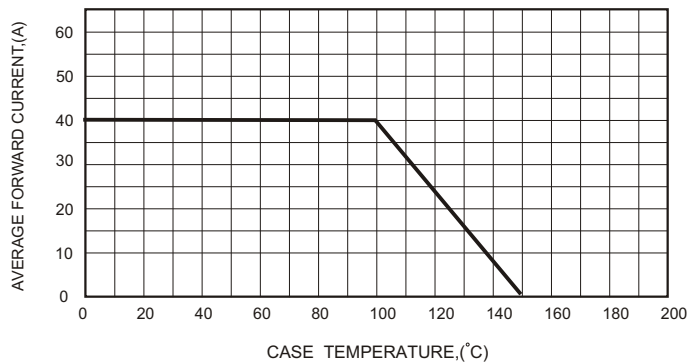


FIG.2-TYPICAL FORWARD CHARACTERISTICS

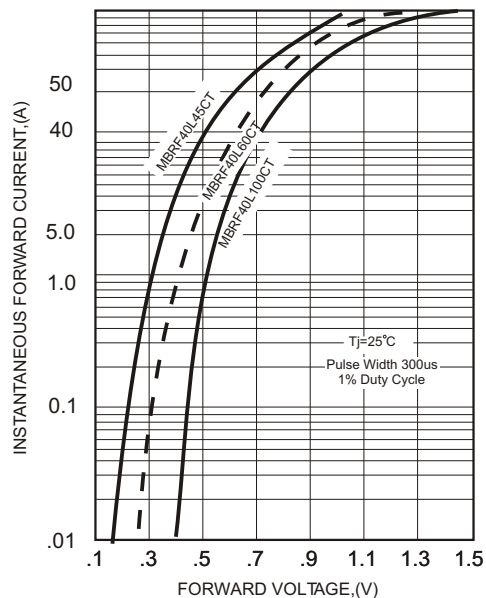


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

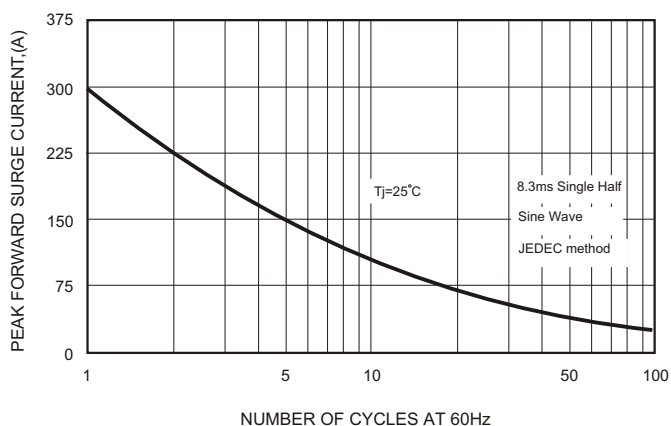


FIG.5-TYPICAL JUNCTION CAPACITANCE

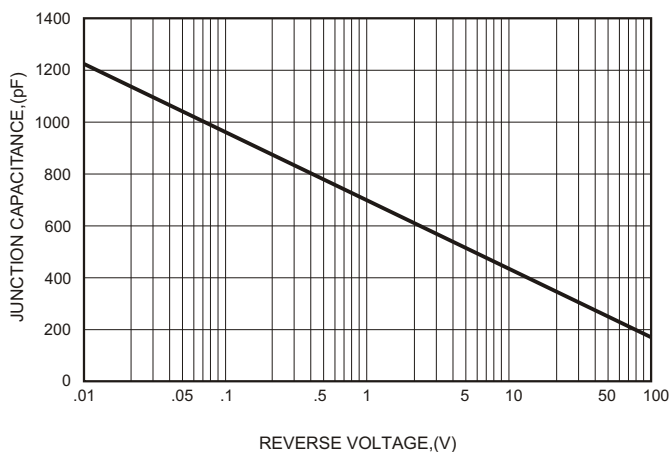
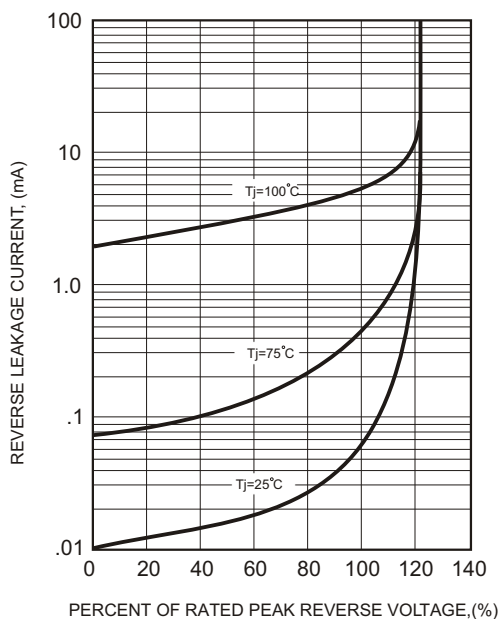
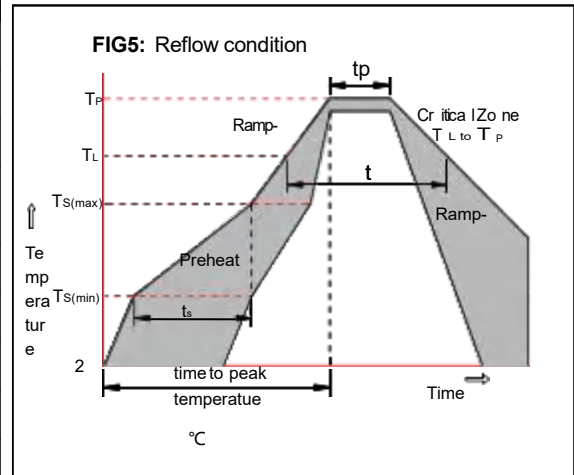


FIG.3 - TYPICAL REVERSE CHARACTERISTICS



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

