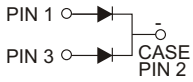
VOLTAGE RANGE
45 to 200 Volts
CURRENT
40.0 Ampere

FEATURES

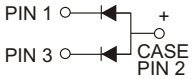
* Low forward voltage drop
* High current capability
* High reliability
* High surge current capability
* Good for switching mode application

MECHANICAL DATA

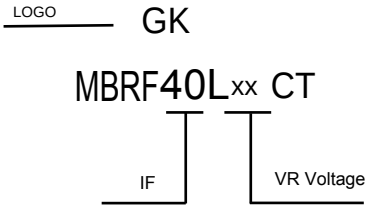
* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: Axial leads, solderable per MIL-STD-202, method 208 guranteed
* Polarity: Color band denotes cathode end
* Mounting position: Any



Positive CT



Negative CT
Suffix "R"



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25℃ ambient temperature uniess otherwies 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 20A	0.47	0.55	0.7	V
Maximum DC Reverse Current Ta=25℃	0.2		0.1	mA
at Rated DC Blocking Voltage Ta=100℃	20		10	mA
Typical Junction Capacitance (Note1)	580			pF
Typical Thermal Resistance RθJC (Note 2)	2.5			℃/W
Operating Temperature Range T_J	-65 —+150			℃
Storage Temperature Range T_{STG}	-65 — +150			℃

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

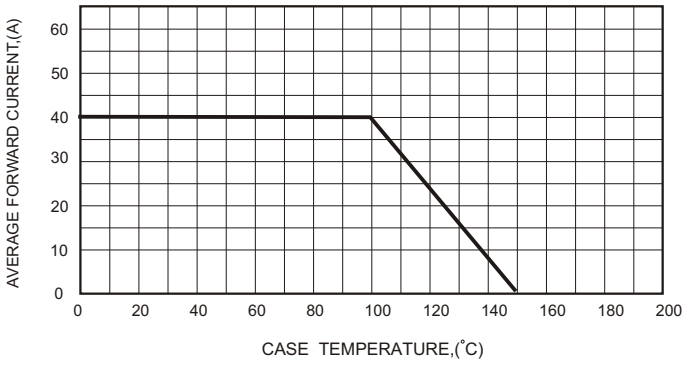


FIG.2-TYPICAL FORWARD CHARACTERISTICS

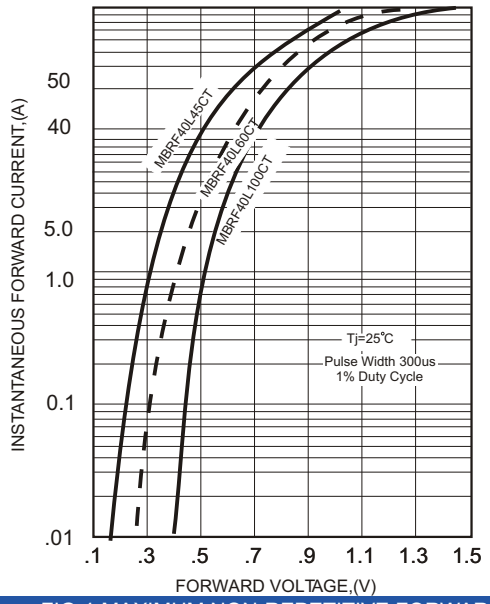


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

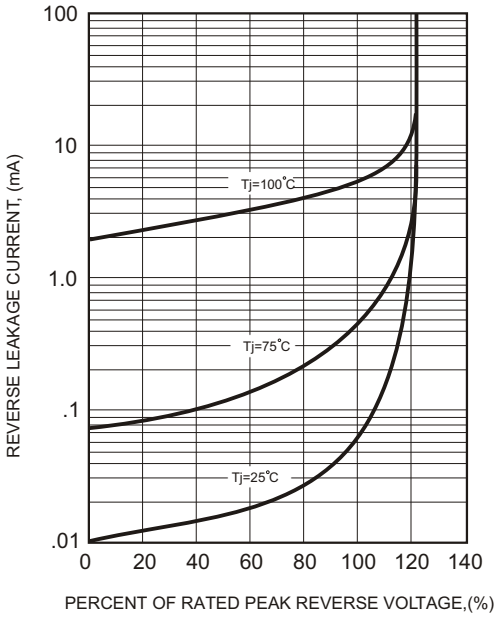


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

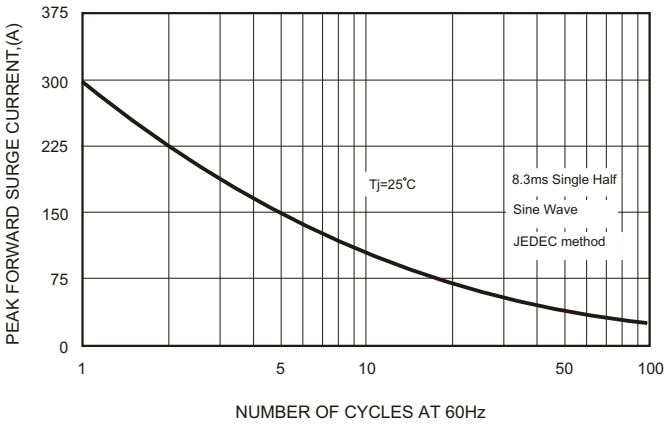
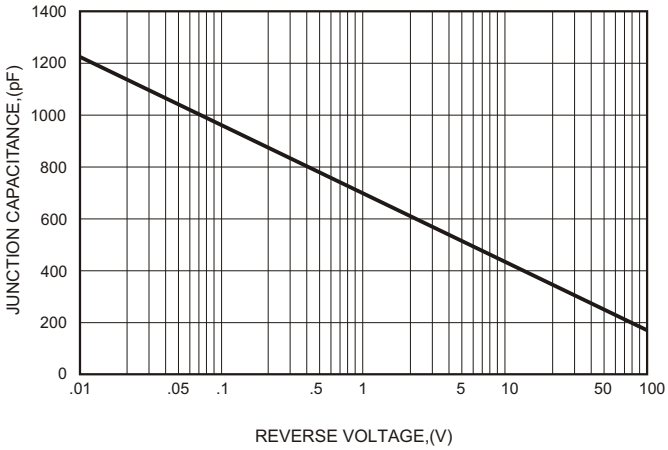


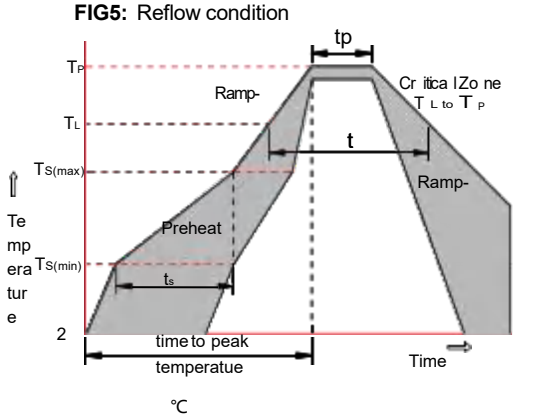
FIG.5-TYPICAL JUNCTION CAPACITANCE



Soldering parameters

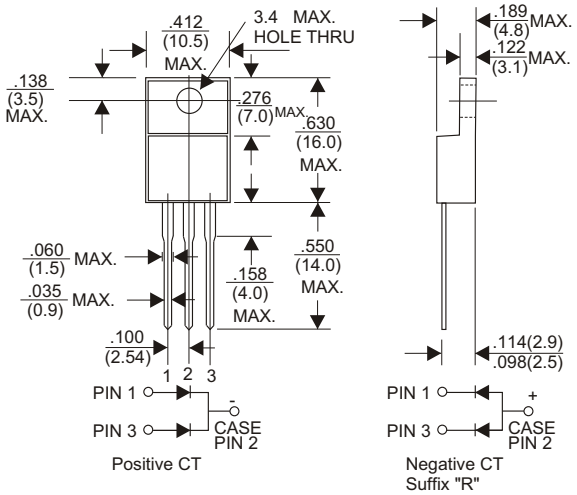
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid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

FIG5: Reflow condition



Package Dimensions & Suggested Pad Layout

ITO-220AB(FULLYINSULATED)



Dimensions in inches and (millimeters)