

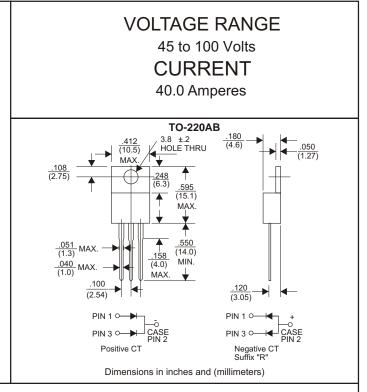
MBR40L45CT THRU MBR40L100C 40.0 AMP SCHOTTKY BARRIER RECTIFIERS

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: Lead solderable per MIL-STD-202, method 208 guranteed
- * Polarity: As Marked
- * Mounting position: Any



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

TYPE NUMBER	MBR40L45CT		MBR40L60CT	MBR40L100CT	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		I-			
at Tc=125°C		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	0.48	0.55	0.7	0.85	V
Maximum DC Reverse Current Ta=25°C		0.2			
at Rated DC Blocking Voltage Ta=100°C		50			
Typical Junction Capacitance (Note1)		550			pF
Typical Thermal Resistance R0JC (Note 2)		2.5			°C/W
Operating Temperature Range TJ		-65 -+150			
Storage Temperature Range Tstg		-65-+150			

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal Resistance Junction to Case.

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE FIG.2-TYPICAL FORWARD **CHARACTERISTICS** 60 AVERAGE FORWARD CURRENT,(A) 50 50 40 INSTANTANEOUS FORWARD CURRENT,(A) 40 30 20 5.0 10 1 0 1.0 0 20 40 60 80 100 120 140 160 180 200 CASE TEMPERATURE,(°C) Tj=25℃ Pulse Width 300us 1% Duty Cycle 0.1 FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT 375 PEAK FORWARD SURGE CURRENT,(A) .01 300 .1 .3 .9 1.3 1.5 .5 .7 1.1 FORWARD VOLTAGE,(V) 225 8.3ms Single Hal Tj=25°C Sine Wave 150 JEDEC method 75 FIG.5 - TYPICAL REVERSE 0 **CHARACTERISTICS** 1 5 10 50 100 100 NUMBER OF CYCLES AT 60Hz FIG.4-TYPICAL JUNCTION CAPACITANCE 10 REVERSE LEAKAGE CURRENT, (mA) 1400 Tj=100°C 1200 JUNCTION CAPACITANCE, (pF) 1.0 1000 800 Ti=75°C 600 .1 400 Tj=25℃ 200 0 ∟ .01 .01 .05 .5 5 10 50 100 .1 1 0 40 60 80 20 100 120 140

RATING AND CHARACTERISTIC CURVES (MBR40L45CT THRU MBR40L100CT)

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REVERSE VOLTAGE,(V)

PERCENT OF RATED PEAK REVERSE VOLTAGE,(%)

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