

40.0A Schottky Barrier Diode

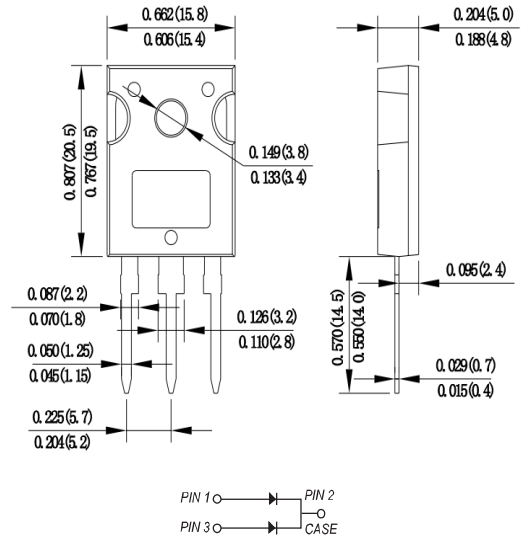
Feature

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed
260°C/10 seconds at terminals

Mechanical Data

- Case : Molded plastic body
- Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity : Polarity symbol marking on body
- Mounting Position : Any

TO-247



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

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

Parameter	Symbols	MBR 4040PT	MBR 4045PT	MBR 4060PT	MBR 40100PT	MBR 40150PT	MBR 40200PT	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	40	45	60	100	150	200	V
Maximum RMS voltage	V _{RMS}	28	31.5	42	70	105	140	V
Maximum DC blocking voltage	V _{DC}	40	45	60	100	150	200	V
Maximum average forward rectified current at T _C =110 C per device per diode	I _(AV)	40.0 20.0						A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	250.0						A
Maximum instantaneous forward voltage per diode at 20.0A	V _F	0.65		0.78	0.85	0.95		V
Maximum DC reverse current at rated DC blocking voltage T _A =25°C T _A =100°C	I _R	0.5 50			0.05 10			mA
Typical thermal resistance	R _{qJC}	2.8						°C/W
Operating junction temperature range	T _J	-55 to +150						°C
Storage temperature range	T _{STG}	-55 to +150						°C



Ratings and Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

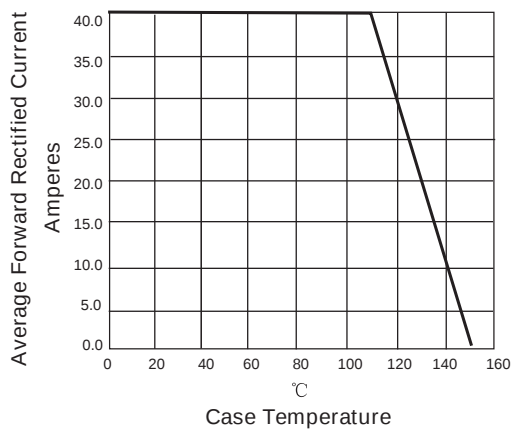


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

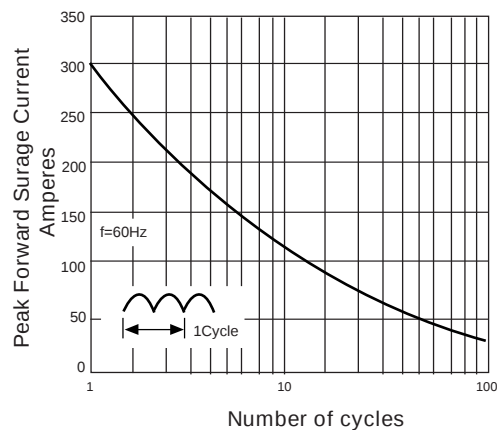


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

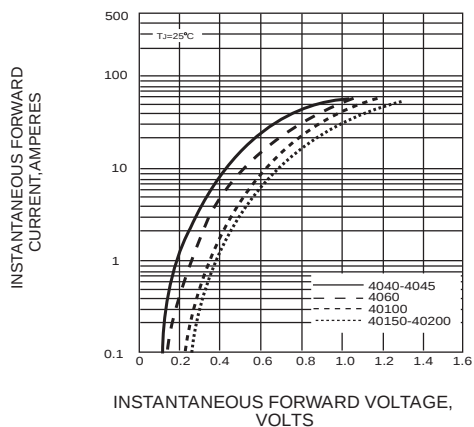
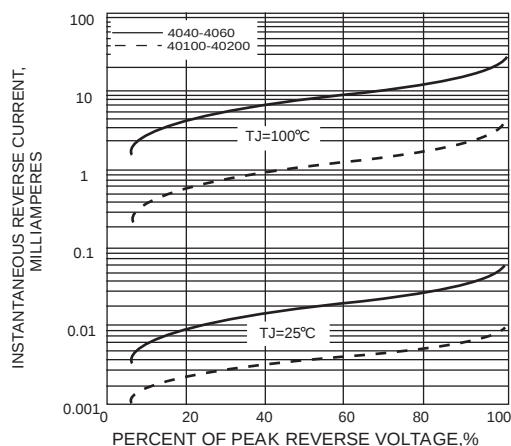
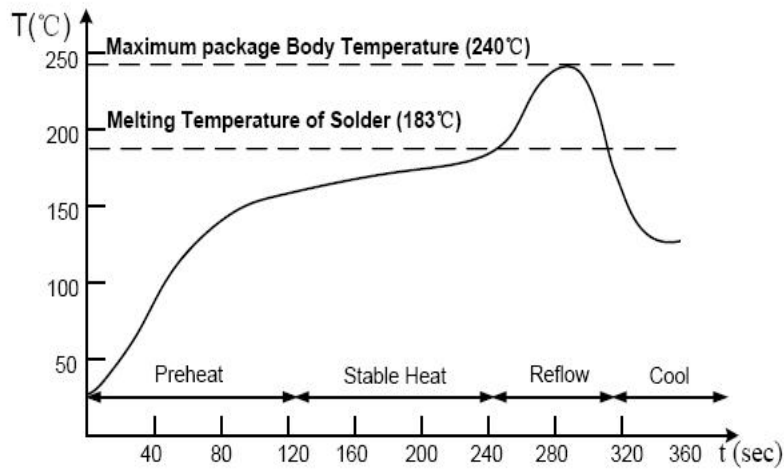


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS





Suggested Soldering Temperature Profile



Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Package	Tube (mm)	Q'TY/Tube (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
TO-247	510*45.5*7.8	0.03	545*150*45	0.45	570*260*150	2.25