

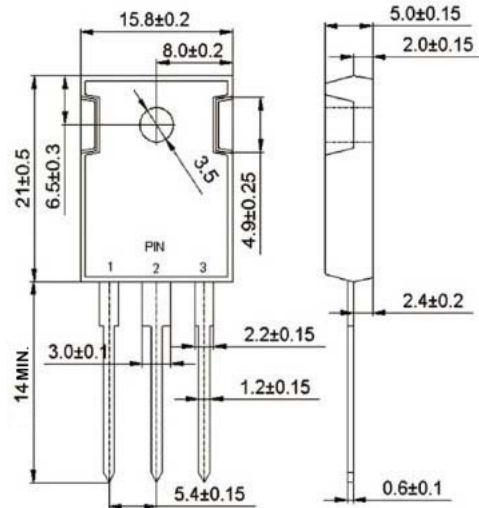
Features

- Schottky Barrier Chip
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- For Use in Low Voltage Application
- Guard Ring Die Construction
- Plastic Case Material has UL Flammability Classification Rating 94V-O

Mechanical Data

- Case: TO-247AD/TO-3P, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Mounting Position: Any
- **Lead Free: For RoHS / Lead Free Version**

TO-247AD/TO-3P



Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	MBR 4040 PT	MBR 4045 PT	MBR 4050 PT	MBR 4060 PT	MBR 40100 PT	MBR 40150 PT	MBR 40200 PT	Units		
Peak Repetitive Reverse Voltage	V_{RRM}	40	45	50	60	100	150	200	V		
Working Peak Reverse Voltage	V_{RWM}										
DC Blocking Voltage	V_R										
RMS Reverse Voltage	$V_{R(RMS)}$	28	31	35	42	70	105	140	V		
Average Rectified Output Current @ $T_L = 75^\circ\text{C}$ (Note 1)	I_O	40.0							A		
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	350							A		
Forward Voltage @ $I_F = 20\text{A}$	V_{FM}	0.70		0.75		0.80		0.90	V		
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_{RM}			0.1				0.05	mA		
				20				10			
Typical Junction Capacitance (Note 2)	C_j	350		280		200			pF		
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	3.5				2.0				$^\circ\text{C/W}$	
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150					-55 to +175				$^\circ\text{C}$

Note: 1. Valid provided that leads are kept at ambient temperature at a distance of 9.5mm from the case.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

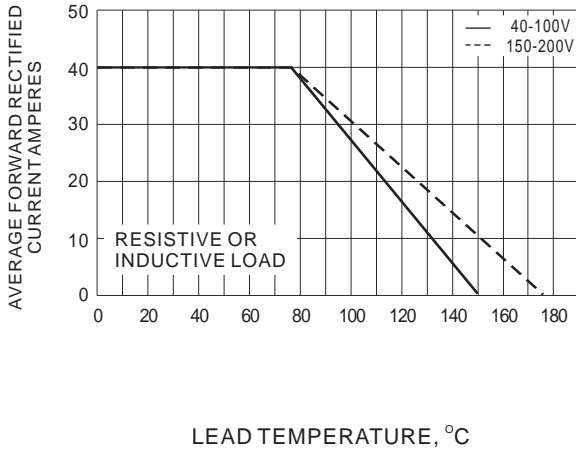


Fig.1- FORWARD CURRENT DERATING CURVE

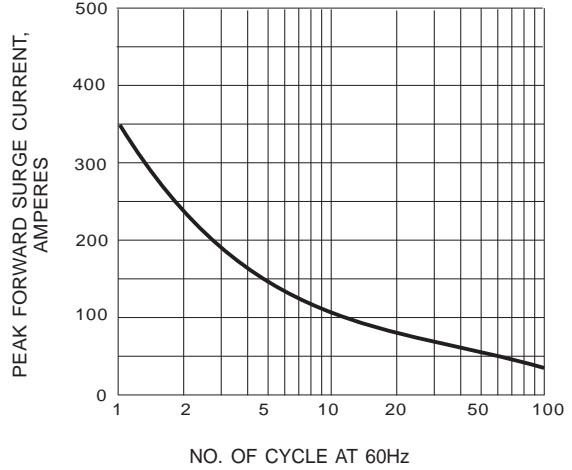


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

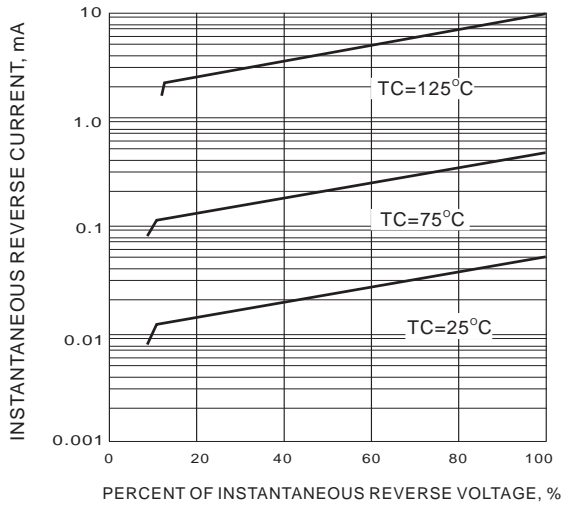


Fig.3- TYPICAL REVERSE CHARACTERISTIC

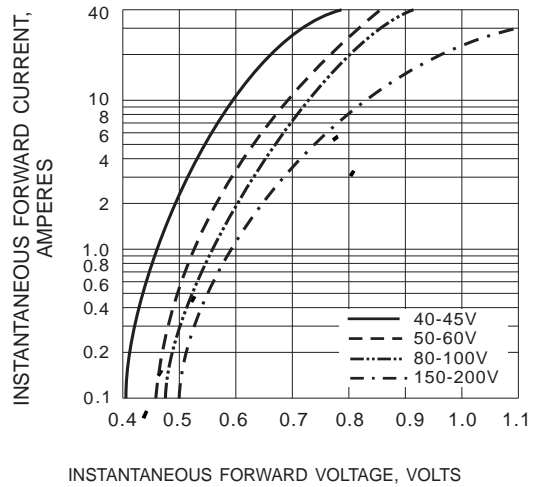


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC