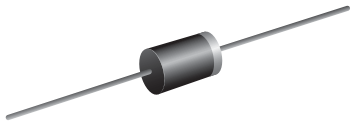
MBR520-MBR5100

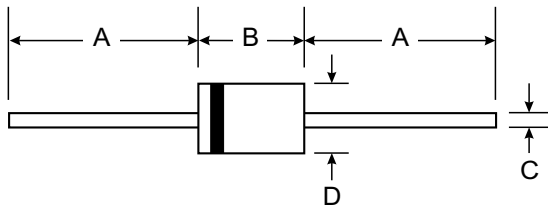
SCHOTTKY BARRIER RECTIFIER DIODES

VOLTAGE RANGE: 20 - 100V
CURRENT: 5.0 A



Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications



DO-201AD		
Dim	**Min**	**Max**
A	25.40	—
B	7.20	9.50
C	1.20	1.30
D	4.80	5.30
All Dimensions in mm		

Mechanical Data

- Case: DO-201AD, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.2 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

RoHS COMPLIANT

Maximum Ratings and Electrical Characteristics

T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	MBR520	MBR530	MBR540	MBR550	MBR560	MBR580	MBR5100	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	50	60	80	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	35	42	56	70	V
Average Rectified Output Current @T_L = 100°C (Note 1)	I_O	5.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150							A
Forward Voltage @I_F = 5.0A	V_{FM}	0.55			0.70		0.85		V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 100°C	I_{RM}	0.5 50							mA
Typical Junction Capacitance (Note 2)	C_j	500			400				pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	10							°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150							°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.

RATINGS AND CHARACTERISTIC CURVES MBR520 THRU MBR5100

FIG. 1- FORWARD CURRENT DERATING CURVE

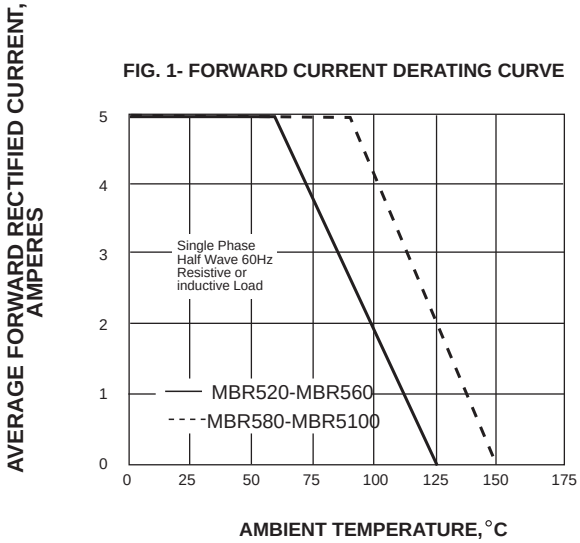


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

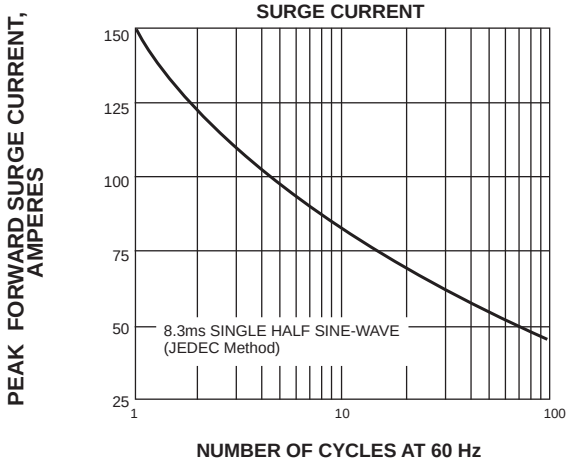


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

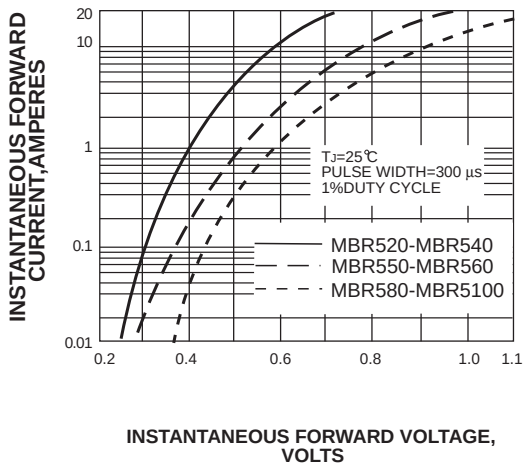


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

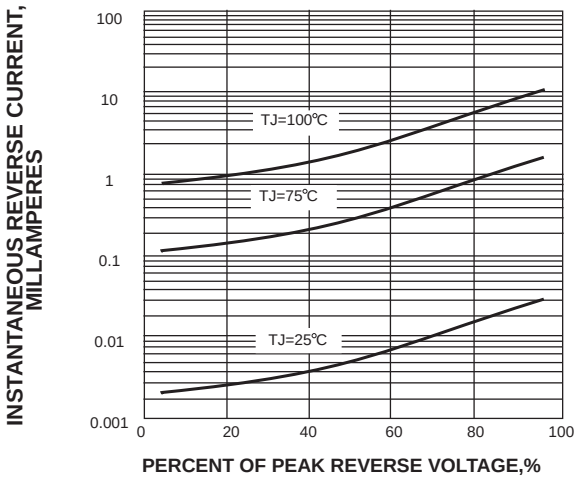


FIG. 5-TYPICAL JUNCTION CAPACITANCE

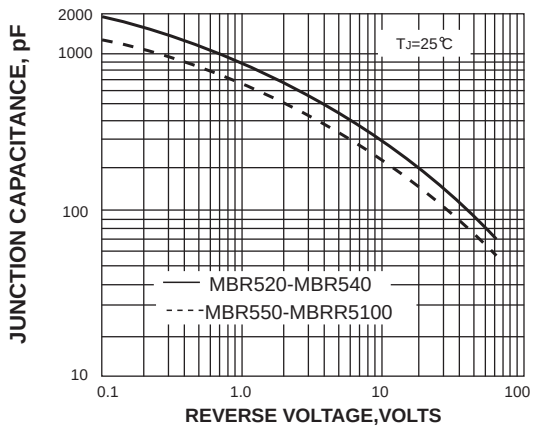


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE