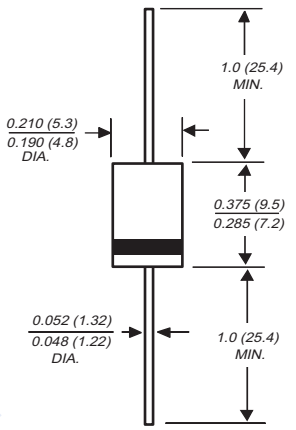
Schottky Barrier Rectifier

MBR320 ~ MBR3100

DO-201AD



Dimensions in inches and (millimeters)

■ Features

- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High forward surge current capability

■ Absolute 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	Symbol	MBR 320	MBR 330	MBR 340	MBR 350	MBR 360	MBR 370	MBR 380	MBR 390	MBR 3100	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	70	80	90	100	V
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	49	56	63	70	
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	70	80	90	100	
Maximum average forward rectified current 0.375”(9.5mm) lead length(see fig.1)	$I_{(AV)}$	3.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	80.0									
Maximum instantaneous forward voltage at 3.0A	V_F	0.55			0.70		0.85				V
Maximum DC reverse current T_A=25℃	I_R	0.5									mA
at rated DC blocking voltage T_A=100℃		20			10						
Typical junction capacitance (Note 1)	C_j	250			160						pF
Typical thermal resistance (Note 2)	R_{thJA}	40									℃/W
Junction Temperature	T_j	-65 to +125			-65 to +150						℃
Storage Temperature	T_{stg}	-65 to +150									

Notes:

1. Measured at 1MHz and applied reverse voltage of 4V D.C
2. Thermal resistance from junction to ambient at 0.375”(9.5mm)lead length,P.C.B. mounted

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■ Typical Characterisitics

FIG. 1- FORWARD CURRENT DERATING CURVE

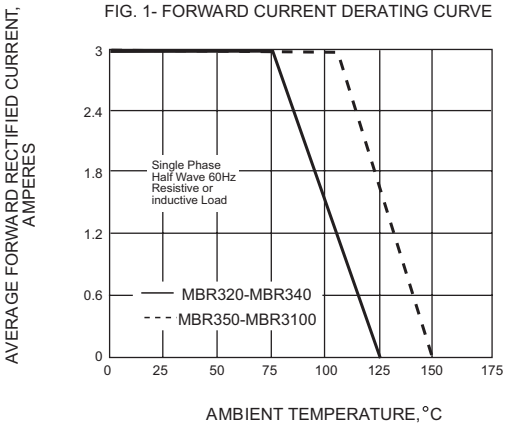

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

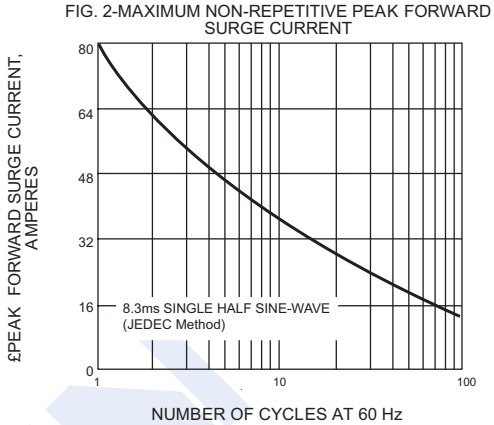

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

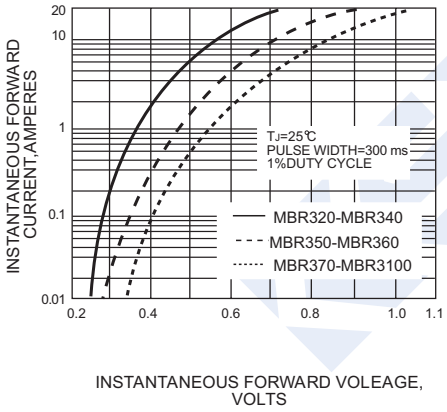

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

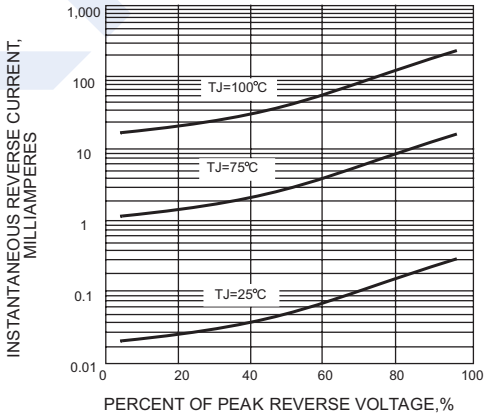

FIG. 5-TYPICAL JUNCTION CAPACITANCE

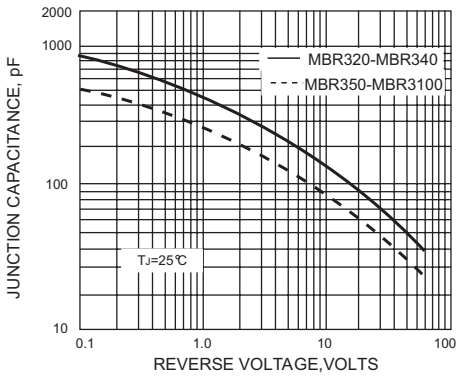

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE