SYNSEMI SEMICONDUCTOR

MBR320 ~ MBR340

SCHOTTKY BARRIER RECTIFIER DIODES

PRV : 20 - 40 Volts
Io : 3.0 Amperes

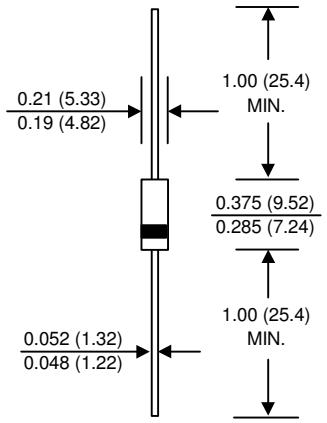
FEATURES :

* High current capability
* High surge current capability
* High reliability
* High efficiency
* Low power loss
* Low forward voltage drop
* Pb / RoHS Free

MECHANICAL DATA :

* Case : DO-201AD Molded plastic
* Epoxy : UL94V-O rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 1.1 grams

DO-201AD



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

RATING	SYMBOL	MBR320	MBR330	MBR340	UNIT
Maximum Peak Repetitive Reverse Voltage	V_{RRM}	20	30	40	V
Maximum Working Peak Reverse Voltage	V_{RMS}	20	30	40	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	V
Maximum Average Forward Current , see Fig.1	$I_{F(AV)}$	3.0			A
Maximum Non-repetitive Peak Surge Current, (Surge applied at rated load conditions, Half wave, single phase 60 Hz, T_L = 75°C)	I_{FSM}	80			A
Maximum Instataneous Forward Voltage at I_F = 3.0 A (1)	V_F	0.6			V
Maximum Reverse Current at	I_R	0.6 (T_L = 25 °C)			mA
Rated DC Blocking Voltage (1)	$I_{R(H)}$	20 (T_L = 25 °C)			mA
Junction Temperature Range	T_J	150			°C
Operating and Storage Junction Temperature Range	T_J , T_{STG}	- 65 to + 150			°C

Note :

(1) Pulse Test : Pulse Width = 300 µs, Duty Cycle = 2%

RATING AND CHARACTERISTIC CURVES (MBR320 - MBR340)

FIG.1 - FORWARD CURRENT DERATING CURVE

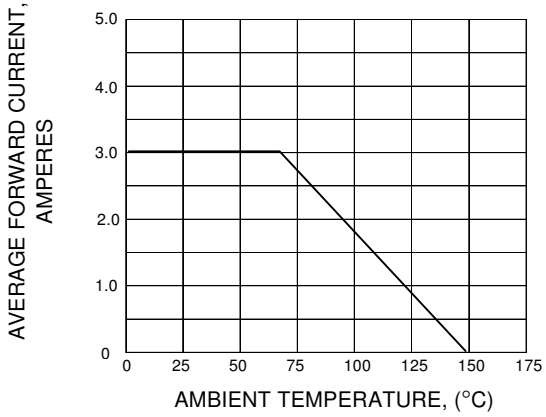


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

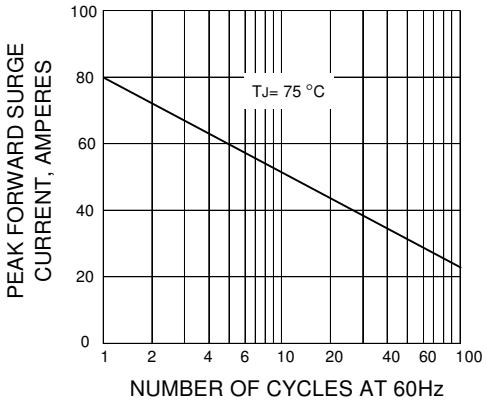


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

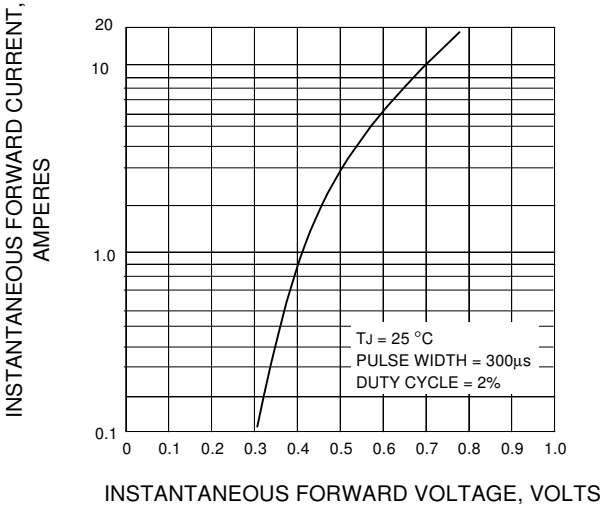


FIG.4 - TYPICAL REVERSE CHARACTERISTICS