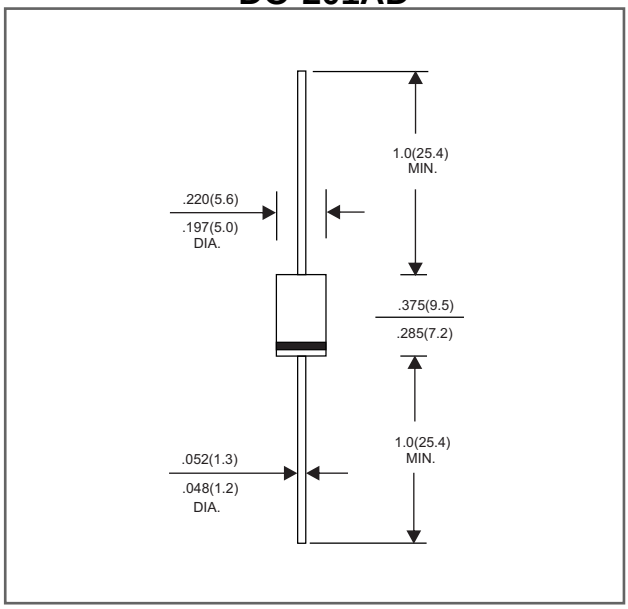
MBR320NG THRU MBR3100NG

Schottky Barrier Rectifier

3.0A Leaded Type Schottky Barrier Rectifiers - 20V-200V

Package outline

DO-201AD



Dimensions in inches and (millimeters)

Features

- Axial lead type devices for through hole design.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guardring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228
- Suffix "-H" indicates Halogen free parts, ex. MBR320NG-H.

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, DO-201AD
- Terminals : Solder plated, solderable per MIL-STD-202, Method 208 guranteed
- Polarity :Color band denotes cathode end
- Mounting Position : Any
- Weight : Approximated 1.10 gram

Maximum ratings (AT T_A=25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.2	I_O			3.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			80	A
Reverse current	V_R = V_{RRM} T_J = 25°C	I_R			0.5	mA
	V_R = V_{RRM} T_J = 100°C				30	
Thermal resistance	Junction to ambient	$R_{\theta JA}$		20		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		250		pF
Storage temperature		T_{STG}	-65		+175	°C

SYMBOLS	V_{RRM} *1 (V)	V_{RMS} *2 (V)	V_R *3 (V)	V_F *4 (V)	Operating temperature T_J, (°C)
MBR320NG	20	14	20	0.55	-55 to +125
MBR330NG	30	21	30		
MBR340NG	40	28	40		
MBR350NG	50	35	50	0.70	-55 to +150
MBR360NG	60	42	60		
MBR380NG	80	56	80	0.85	
MBR3100NG	100	70	100		
MBR3150NG	150	105	150	0.90	
MBR3200NG	200	140	200	0.95	

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@I_F=3.0A

Rating and characteristic curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

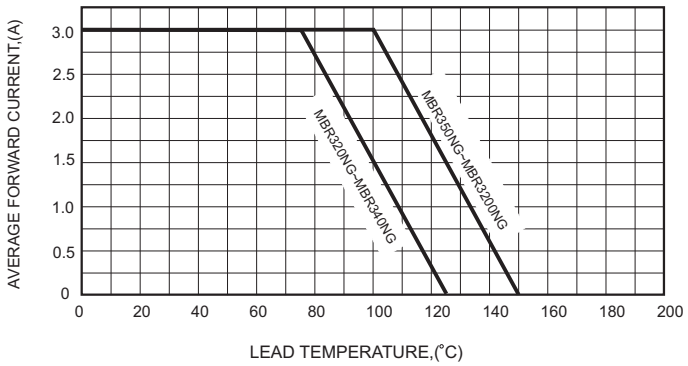


FIG.2-TYPICAL FORWARD CHARACTERISTICS

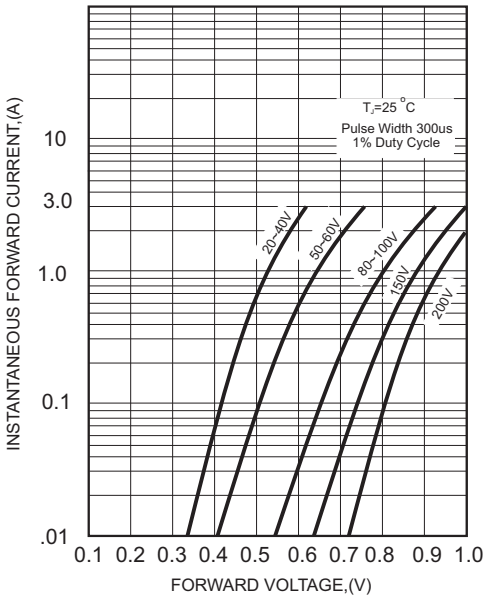


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

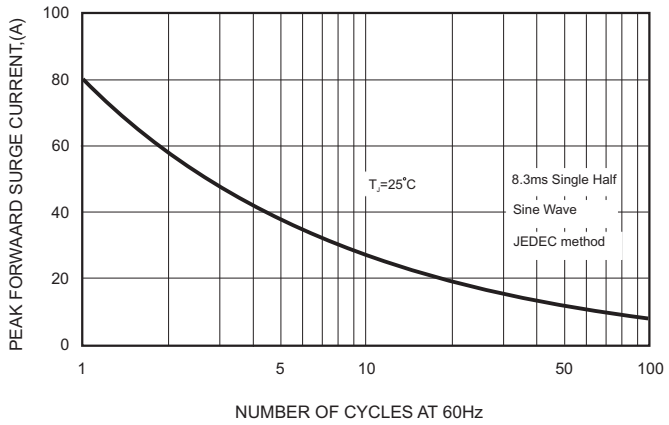


FIG.4-TYPICAL JUNCTION CAPACITANCE

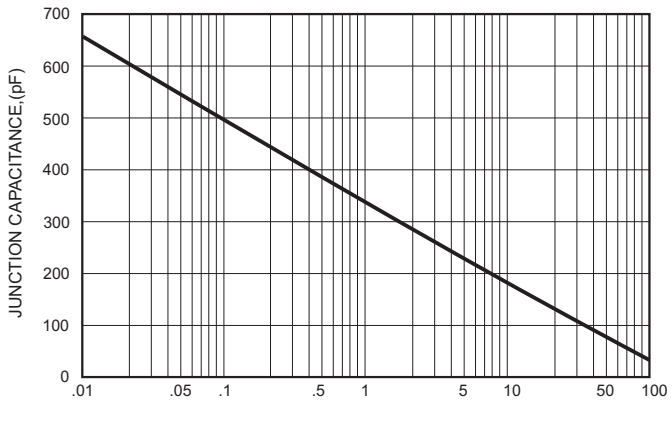


FIG.5 - TYPICAL REVERSE CHARACTERISTICS