

## 5.0A Leaded Type Schottky Barrier Rectifiers - 20V-200V

### Features

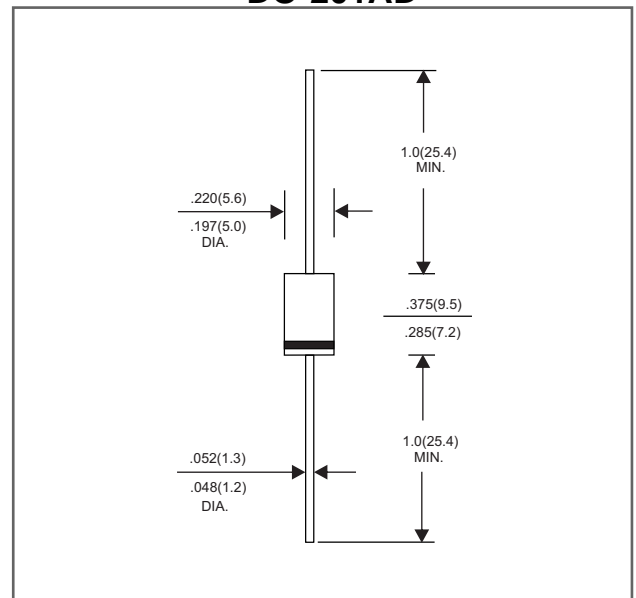
- Axial lead type devices for through hole design.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guardring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228
- Suffix "-H" indicates Halogen free parts, ex. MBR520NG-H.

### Mechanical data

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

### Package outline

#### DO-201AD



Dimensions in inches and (millimeters)

### Maximum ratings (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.2	$I_O$			5.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	$I_{FSM}$			150	A
Reverse current	$V_R = V_{RRM} T_J = 25^{\circ}\text{C}$	$I_R$			0.5	mA
	$V_R = V_{RRM} T_J = 100^{\circ}\text{C}$				50	
Thermal resistance	Junction to ambient	$R_{\theta JA}$		10		$^{\circ}\text{C}/\text{W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	$C_J$		380		pF
Storage temperature		$T_{STG}$	-65		+175	$^{\circ}\text{C}$

SYMBOLS	$V_{RRM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	Operating temperature $T_J$ , ( $^{\circ}\text{C}$ )
MBR520NG	20	14	20	0.55	-55 to +125
MBR530NG	30	21	30		
MBR540NG	40	28	40		
MBR550NG	50	35	50	0.70	-55 to +150
MBR560NG	60	42	60		
MBR580NG	80	56	80	0.85	
MBR5100NG	100	70	100		

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

\*3 Continuous reverse voltage

\*4 Maximum forward voltage @  $I_F=5.0\text{A}$

## Rating and characteristic curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

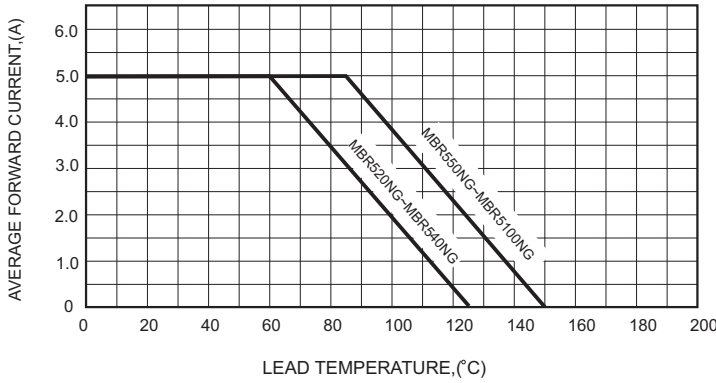


FIG.2-TYPICAL FORWARD CHARACTERISTICS

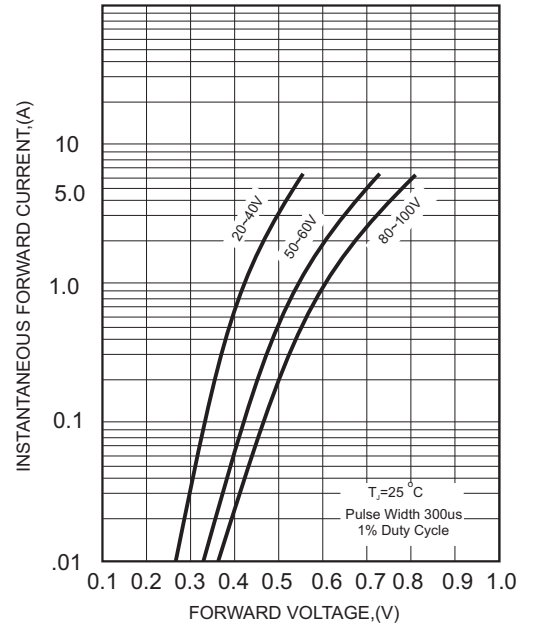


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

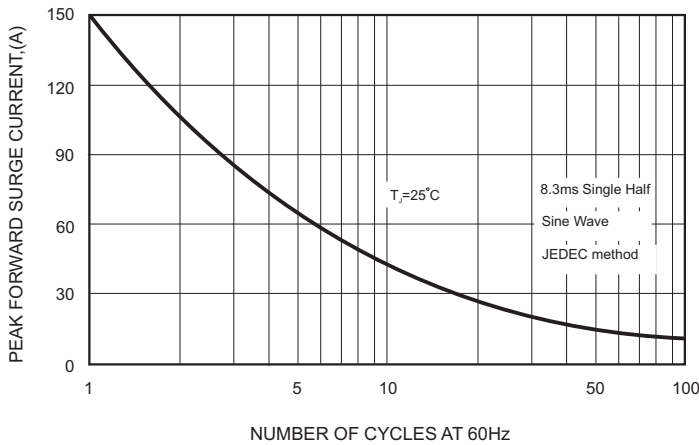


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

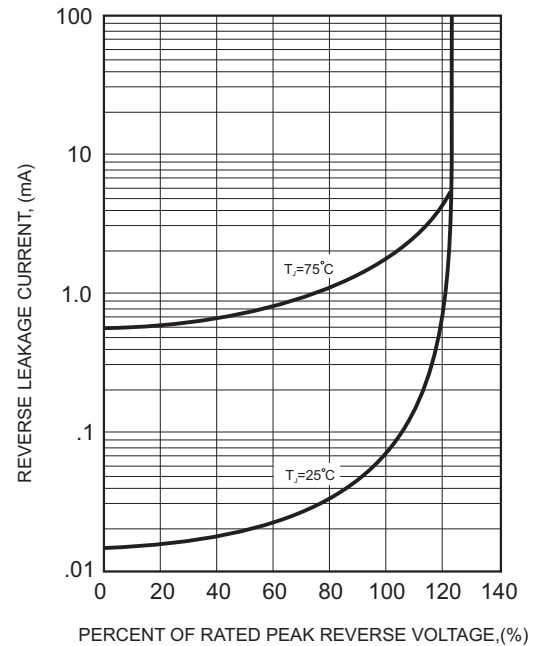


FIG.4-TYPICAL JUNCTION CAPACITANCE

