

■ Features

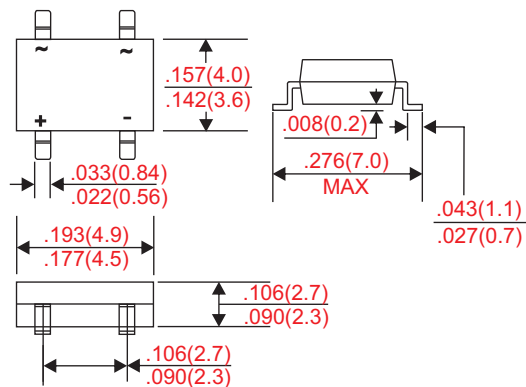
- Metal semiconductor junction with guard ring.
- Silicon epitaxial planar chips.
- Very low forward drop down voltage.
- For use in low voltage, high efficiency inverters, free wheeling, and polarity protection applications.
- Lead-free parts meet RoHS requirements.
- Suffix "G" indicates Halogen-free part, ex. MBK22SG.
- UL recognized file # E321971

■ Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, MDS / TO-269AA
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : marked on body
- Weight : 0.04 ounce, 1.0 gram

■ Outline

MDS(TO-269AA)



Dimensions in inches and (millimeters)

■ Maximum ratings and electrical characteristics

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

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current		I_O			2.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}			50	A
Reverse current	$V_R = V_{RRM} \quad T_A = 25^\circ\text{C}$	I_R			0.5	mA
	$V_R = V_{RRM} \quad T_A = 100^\circ\text{C}$				20	
Storage temperature		T_{STG}	-55		+175	°C

Symbol	Marking code	Max. repetitive peak reverse voltage V_{RRM} (V)	Max. RMS voltage V_{RMS} (V)	Max. DC blocking voltage V_R (V)	Max. forward voltage @2A, $T_A = 25^\circ\text{C}$ V_F (V)	Operating temperature T_J (°C)
MBK22S	MBK22S	20	14	20	0.45	-55 ~ +150
MBK24S	MBK24S	40	28	40	0.50	
MBK26S	MBK26S	60	42	60	0.70	
MBK210S	MBK210S	100	70	100	0.81	
MBK215S	MBK215S	150	105	150	0.87	-55 ~ +175
MBK220S	MBK220S	200	140	200	0.90	

■ Rating and characteristic curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

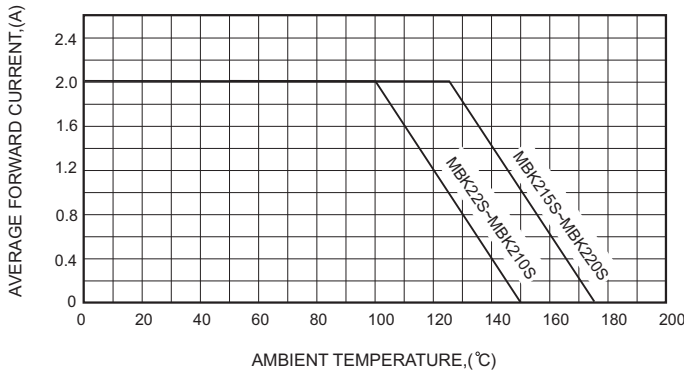


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

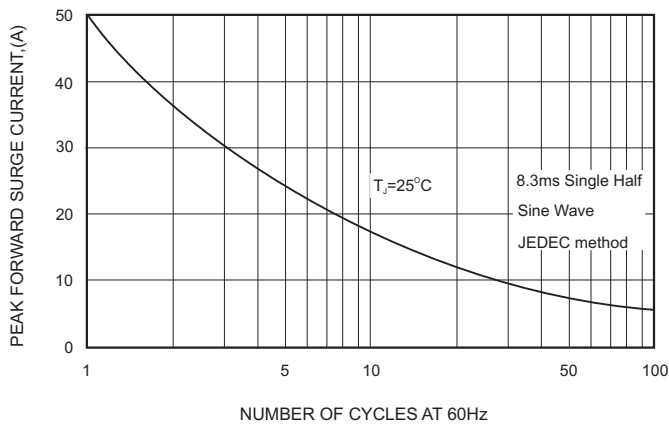


FIG.4-TYPICAL JUNCTION CAPACITANCE

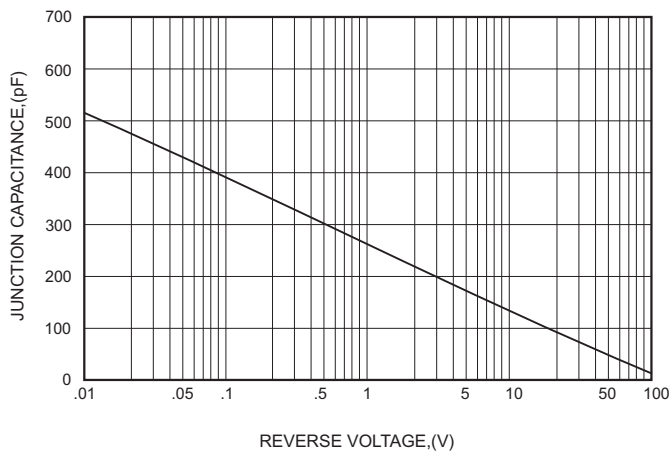


FIG.2-TYPICAL FORWARD CHARACTERISTICS

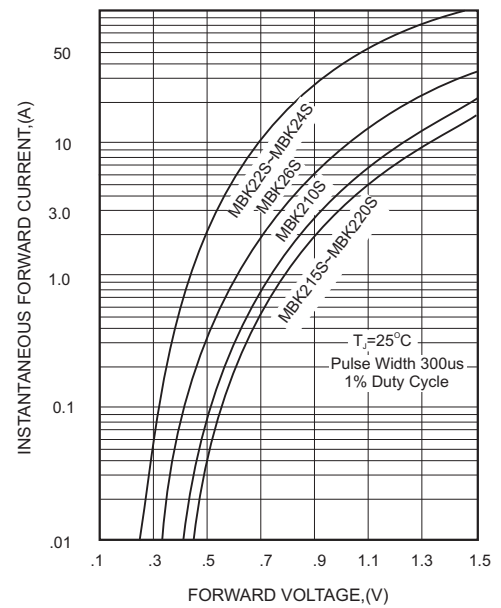
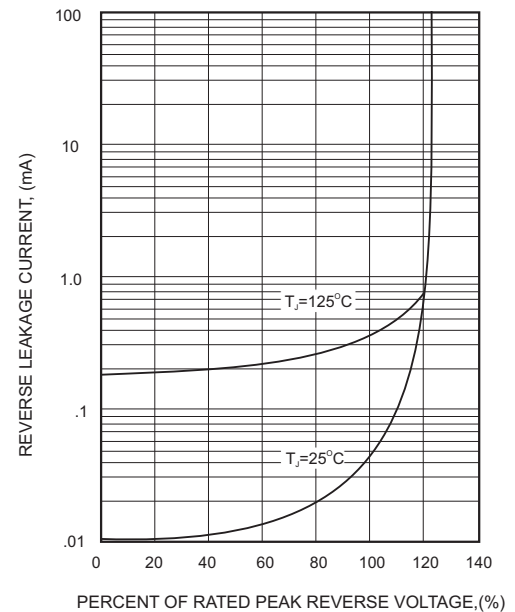
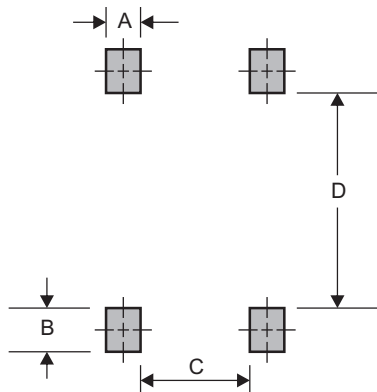


FIG.5 - TYPICAL REVERSE CHARACTERISTICS



■ MDS(TO-269AA) foot print



A	B	C	D
0.030 (0.76)	0.059 (1.50)	0.070 (1.78)	0.226 (5.75)

Dimensions in inches and (millimeters)

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