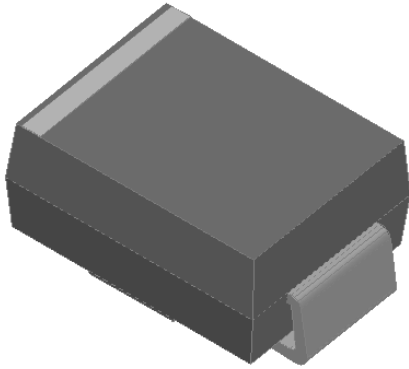


Surface Mount Fast Recovery Rectifier

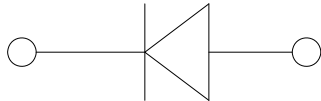


Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Fast reverse recovery time
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Typical Applications

For use in high frequency rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.



Mechanical Data

- **Package:** DO-214AA (SMB)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■Maximum Ratings (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GR3AB	GR3BB	GR3DB	GR3GB	GR3JB	GR3KB	GR3MB
Device marking code			GR3AB	GR3BB	GR3DB	GR3GB	GR3JB	GR3KB	GR3MB
Repetitive peak reverse voltage	V _{RRM}	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)	I _O	A	3.0						
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, T _a =25°C	I _{FSM}	A	100						
Storage temperature	T _{stg}	°C	-55~+150						
Junction temperature	T _j	°C	-55~+150						

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GR3AB	GR3BB	GR3DB	GR3GB	GR3JB	GR3KB	GR3MB
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =3.0A	1.3						
Maximum reverse recovery time	t _{rr}	ns	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	150				250	500	
Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM	IRRM	μA	T _a =25℃	5.0						
			T _a =125℃	100						



GR3AB THRU GR3MB

■ Thermal Characteristics ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GR3AB	GR3BB	GR3DB	GR3GB	GR3JB	GR3KB	GR3MB
Typical Thermal resistance	$R_{\theta J-A(1)}$	$^{\circ}\text{C/W}$	75						
	$R_{\theta J-L(1)}$		20						

Note:

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas

■ Characteristics (Typical)

FIG.1: I_o - T_L Curve

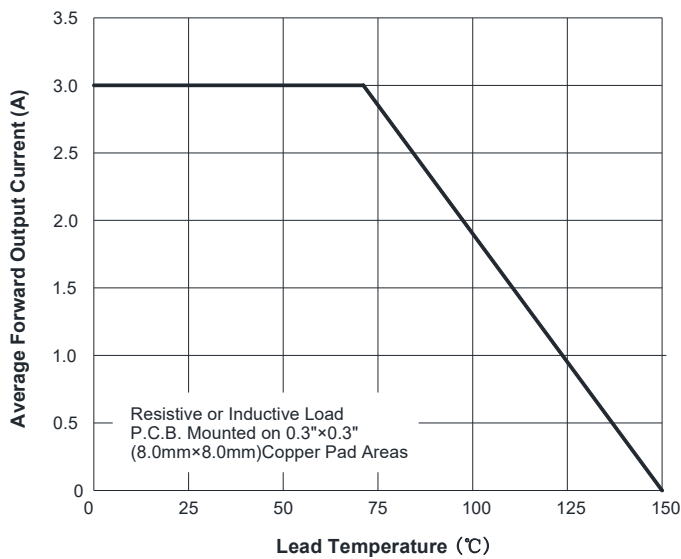


FIG.2: Forward Surge Current Capability

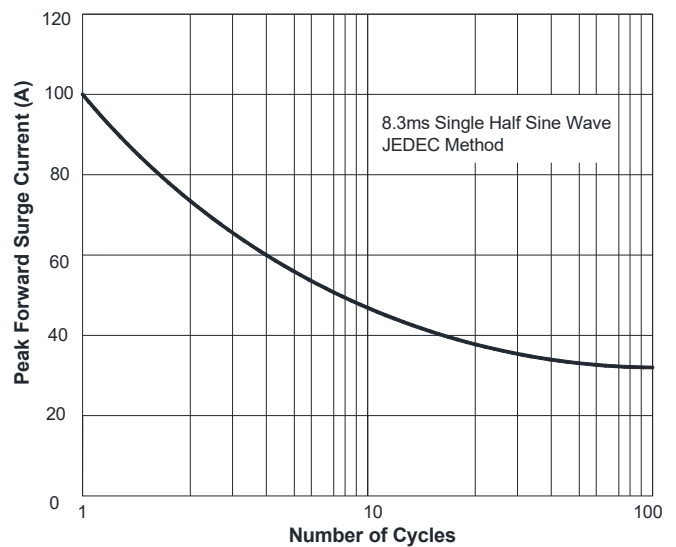


FIG.3: Forward Voltage

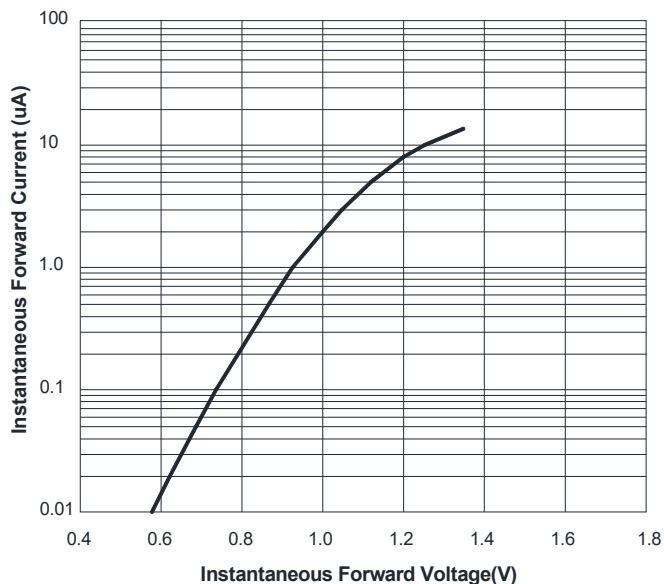
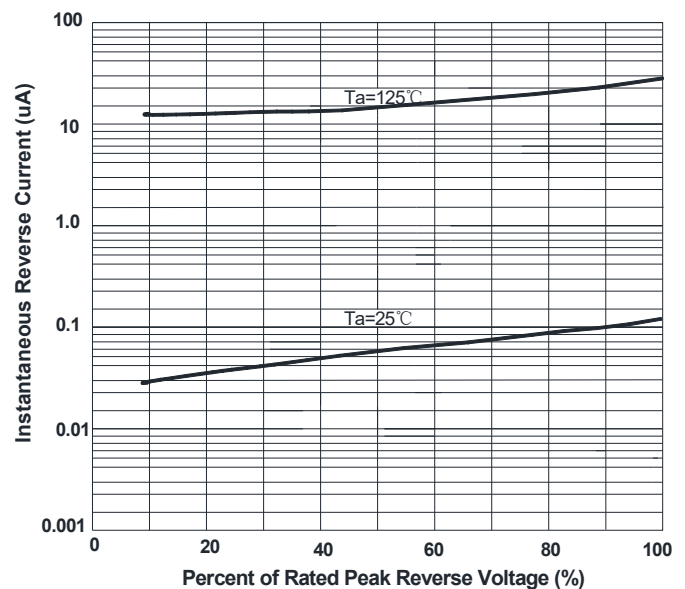


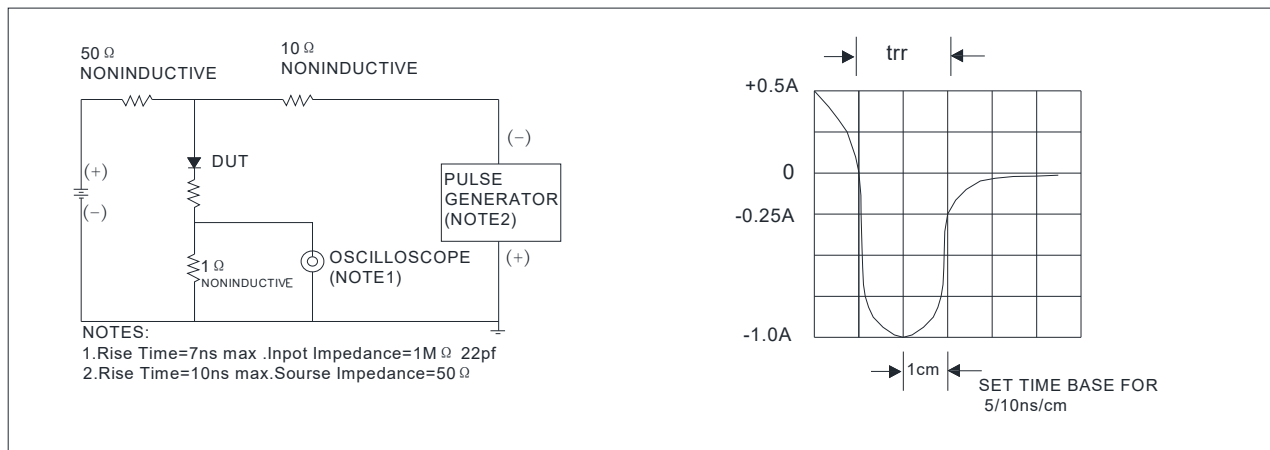
FIG.4: Typical Reverse Characteristics





GR3AB THRU GR3MB

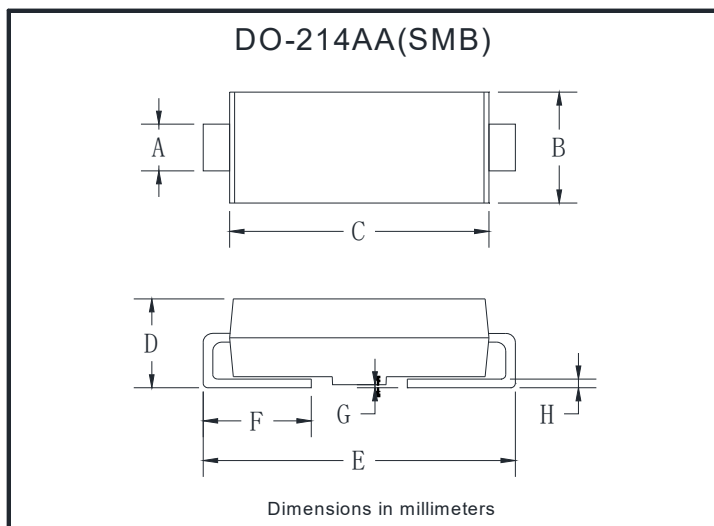
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GR3AB-GR3MB	F1	Approximate 0.096	3000	6000	48000	13" reel
GR3AB-GR3MB	F2	Approximate 0.096	750	3000	24000	7" reel
GR3AB-GR3MB	F3	Approximate 0.096	500	2000	16000	7" reel

■ Outline Dimensions

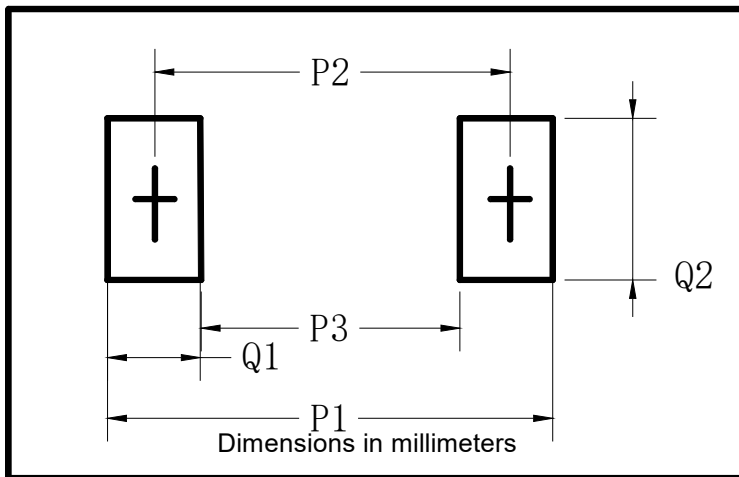


DO-214AA(SMB)		
Dim	Min	Max
A	1.85	2.15
B	3.30	3.94
C	4.25	4.75
D	1.99	2.61
E	5.21	5.59
F	0.90	1.41
G	0.10	0.20
H	0.15	0.31



GR3AB THRU GR3MB

■ Suggested pad layout



DO-214AA(SMB)	
Dim	Millimeters
P1	6.8
P2	4.3
P3	1.8
Q1	2.5
Q2	2.3



GR3AB THRU GR3MB

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