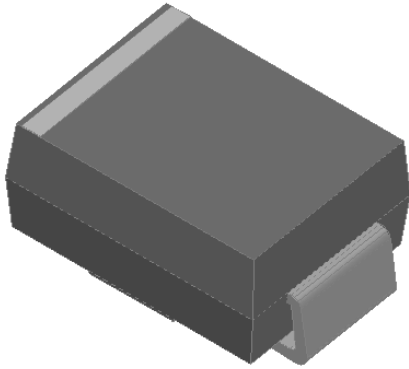


Surface Mount Fast Recovery Rectifier

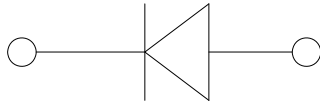


Features

- 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, automotive, 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	GR2A	GR2B	GR2D	GR2G	GR2J	GR2K	GR2M
Device marking code			GR2A	GR2B	GR2D	GR2G	GR2J	GR2K	GR2M
Repetitive peak reverse voltage	V _{RRM}	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, resistance load, T _L (Fig.1)	I _O	A	2.0						
Surge(non-repetitive)forward current @ 60Hz half-sine wave, 1 cycle, T _a =25°C	I _{FSM}	A	50						
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	GR2A	GR2B	GR2D	GR2G	GR2J	GR2K	GR2M
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =2.0A	1.3						
Maximum reverse recovery time	t _r	ns	I _F =0.5A, I _R =1.0A, I _r =0.25A	150				250	500	
Maximum DC reverse current at rated DC blocking voltage per diode @ V _{RM} =V _{RRM}	I _{RRM}	μA	T _a =25℃	5.0						
			T _a =125℃	200						



GR2A THRU GR2M

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

PARAMETER	SYMBOL	UNIT	GR2A	GR2B	GR2D	GR2G	GR2J	GR2K	GR2M
Thermal resistance	$R_{\theta J-A}(1)$	$^{\circ}\text{C}/\text{W}$	55 ¹⁾						
	$R_{\theta J-L}(1)$		18 ¹⁾						

Note

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.27" x 0.27" (7.0 mm x 7.0 mm) copper pad areas

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GR2A-GR2M	F2	Approximate 0.097	750	3000	24000	7" reel
GR2A-GR2M	F1	Approximate 0.097	3000	6000	48000	13" reel

■ Characteristics (Typical)

FIG1: I_o - T_L Curve

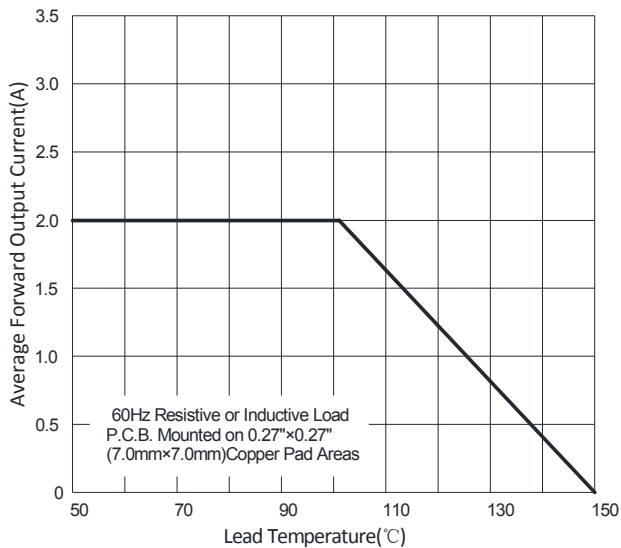


FIG2: Surge Forward Current Capability

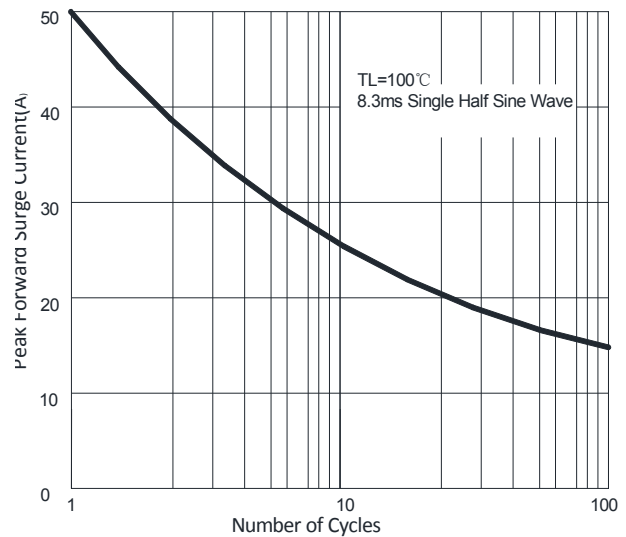


FIG3: Forward Voltage

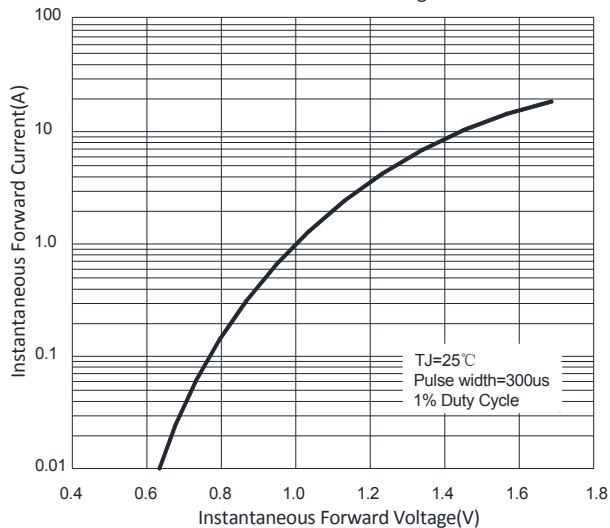


FIG4: Typical Reverse Characteristics

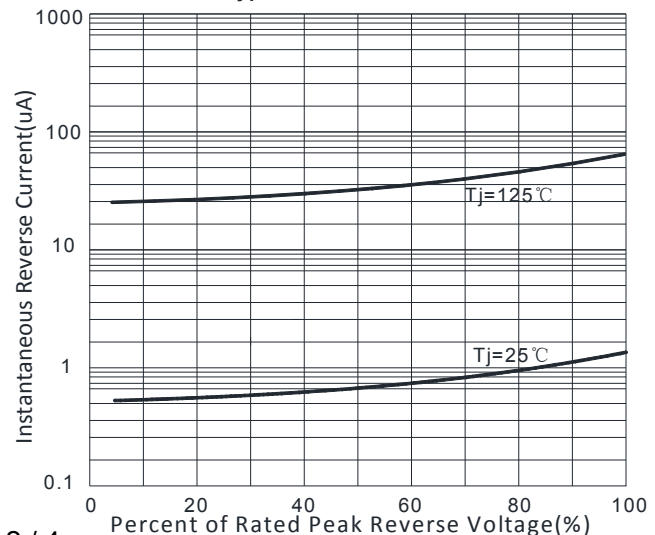
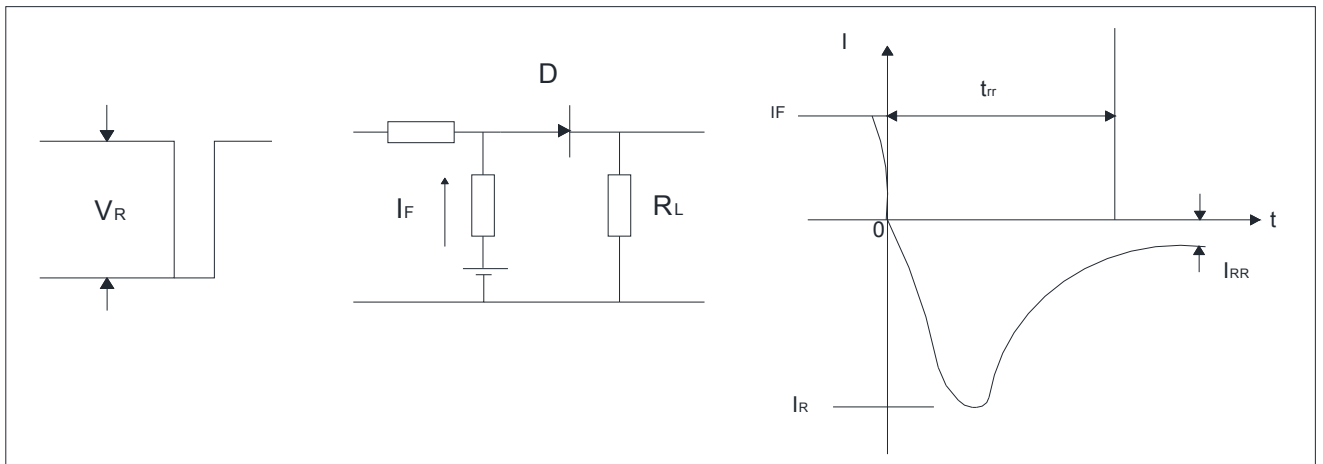
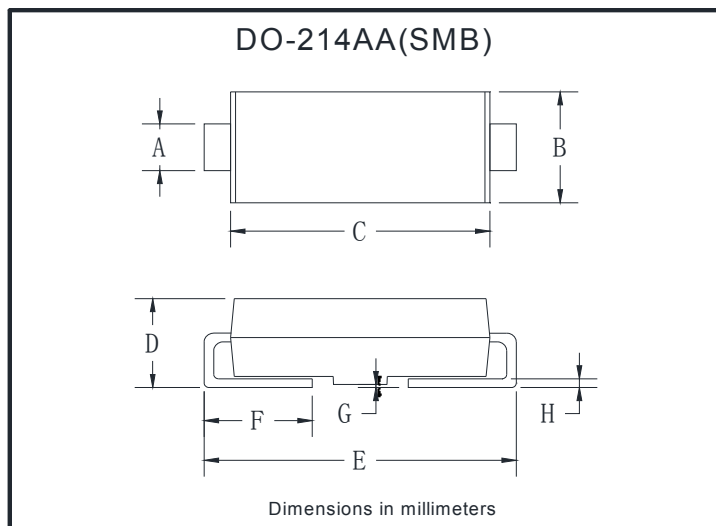


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

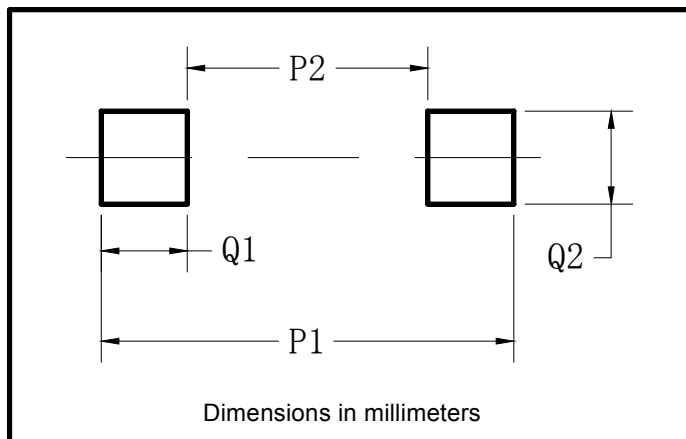


■ Outline Dimensions



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

■ Suggested pad layout



Dim	Min
P1	5.80
P2	1.76
Q1	2.07
Q2	2.72



GR2A THRU GR2M

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