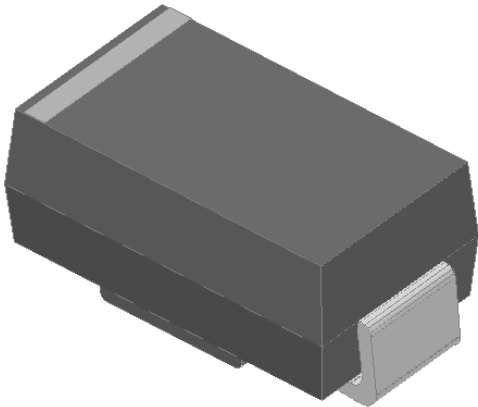


Surface Mount Fast Recovery Rectifier

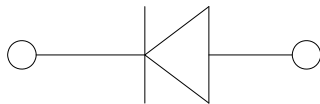


Features

- 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 fast switching rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.



Mechanical Data

- **Package:** DO-214AC (SMA)
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 Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GR1A	GR1B	GR1D	GR1G	GR1J	GR1K	GR1M
Device marking code	O	A	GR1A	GR1B	GR1D	GR1G	GR1J	GR1K	GR1M

Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _j =25	I _{FSM}	A	30						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25			60						
Current squared time @1ms≤t≤8.3ms T _j =25	I ² t	A ² s	3.735						
Storage temperature	T _{stg}		-55 ~ +150						
Junction temperature	T _j		-55 ~ +150						

■Electrical Characteristics T_a=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GR1A	GR1B	GR1D	GR1G	GR1J	GR1K	GR1M
Maximum instantaneous forward voltage	V _F	V	I _{FM} =1.0A	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	I _R	μA	T _j =25	5						
			T _j =125	100						
Typical junction capacitance	C _j	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	13				8	7	



GR1A THRU GR1M

■ Thermal Characteristics $T_a=25$ Unless otherwise specified

PARAMETER	SYMBOL	UNIT	GR1A	GR1B	GR1D	GR1G	GR1J	GR1K	GR1M
Typical Thermal Resistance	$R_{\theta J-A}^{(1)}$	/W	75						
	$R_{\theta J-L}^{(1)}$		22						
	$R_{\theta J-C}^{(1)}$		20						

Note

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

■ Characteristics (Typical)

FIG.1: Io-TL Curve

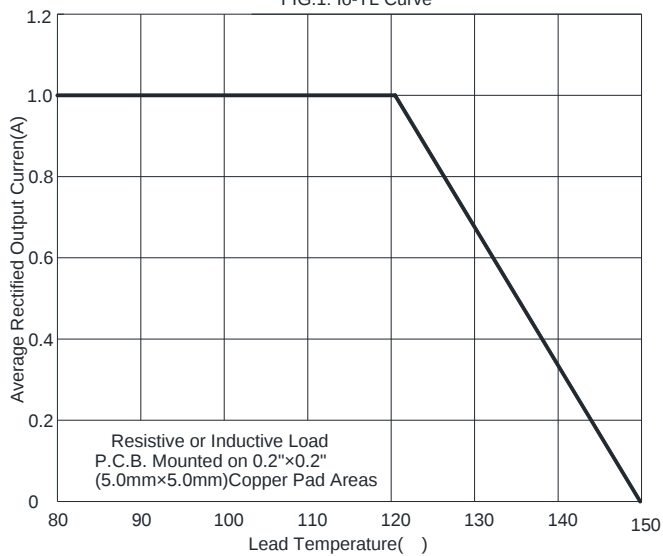


FIG2: Surge Forward Current Capability

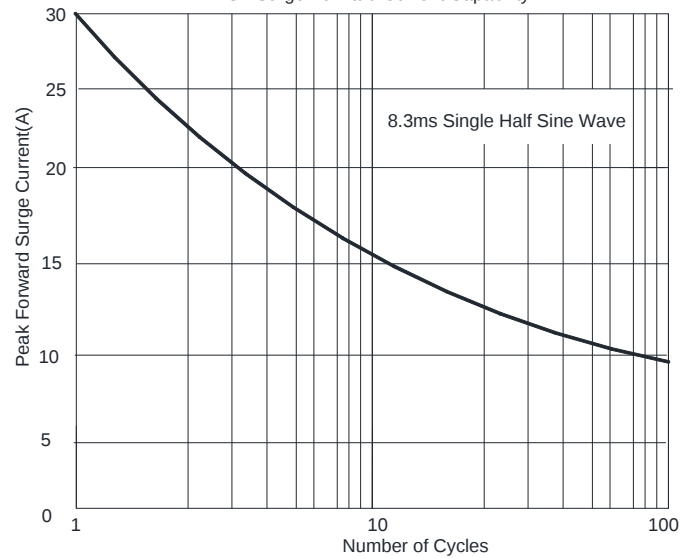


FIG3 Typical Forward Voltage

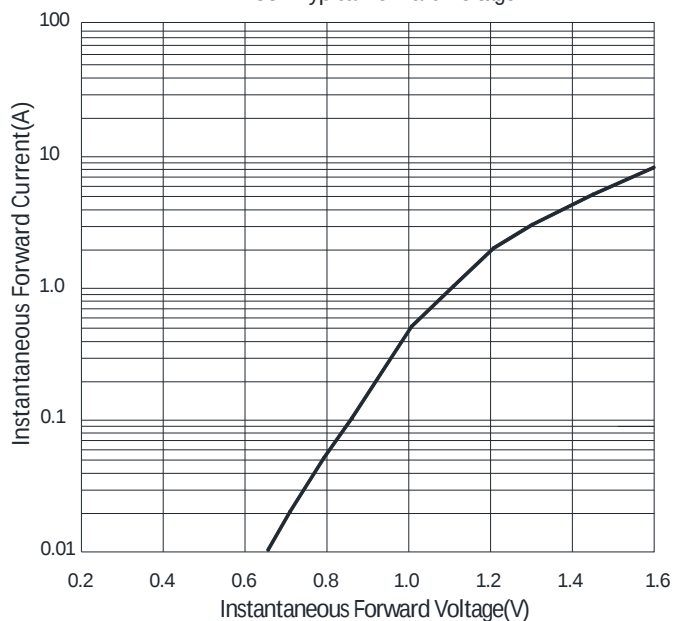
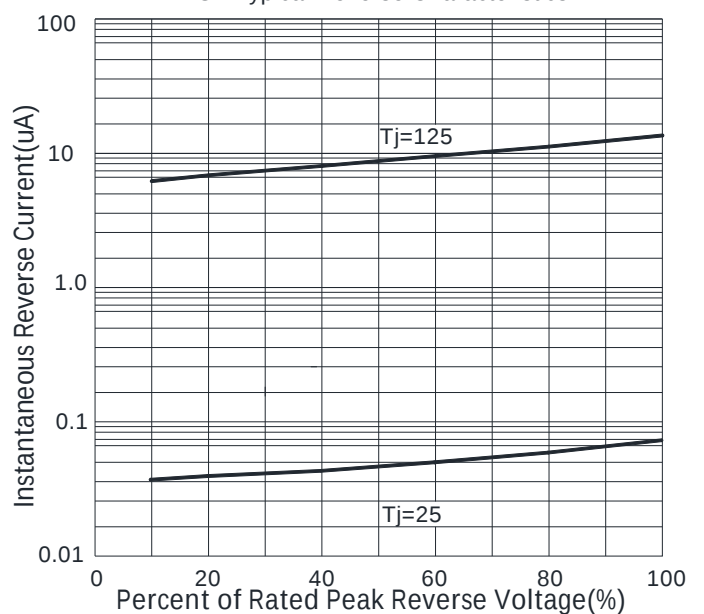


FIG4: Typical Reverse Characteristics





GR1A THRU GR1M

■Suggested Pad Layout

DO-214AC(SMA)	
Dim	Millimeters
P1	4.00
P2	1.50
P3	6.50
Q1	2.50
Q2	1.70



GR1A THRU GR1M

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