

1A, 200V~600V Super Fast Recovery Rectifier Diode
Features

- AEC-Q101 Qualified
- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- Low forward voltage, low power losses
- High forward surge capability
- Meets MSL level 1, per J-STD-020,LF maximum peak of 260°C


SMA (DO-214AC)


Cathode ○ —|<— ○ Anode

Typical Applications

For use in high frequency rectification of power supply, inverters, converters, and freewheeling diodes.

Mechanical Data

- Case: SMA(DO-214AC) molding compound meets UL94V-0 flammability rating, RoHS-Compliant
- 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	ES1D	ES1G	ES1J	Unit
Repetitive Peak Reverse Voltage	V _{RRM}	200	400	600	V
Average Forward Current Half-sine wave, Resistance load, T _a (Fig 1)	I _O	1.0			A
Surge(Nonrepetitive)Forward Current 60HZ sine wave, 1 cycle, T _a =25°C	I _{FSM}	30			A
Current Squared Time 1ms≤t<8.3ms T _j =25°C, Rating of per diode	I ² t	3.7			A ² s
Thermal Resistance Between junction and case	R _{θJ-A}	85			°C/W
Operating Junction and Storage Temperature Range	T _J , T _{STG}	- 55 to + 175°C			

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

Parameter	Symbol	ES1D	ES1G	ES1J	Unit
Peak Forward Voltage I _F =1.0A	V _{FM}	0.95	1.3	1.7	V
Peak Reverse Current T _a =25°C T _a =125°C	I _{RRM1} I _{RRM2}	5 200			μA
Maximum reverse recovery time I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	T _{rr}	35			ns

Electrical Characteristics Curves

Fig 1: Forward Current Derating Curve

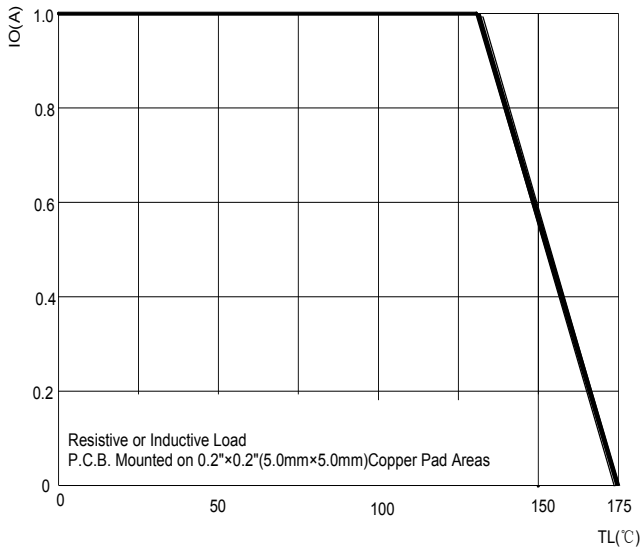


Fig 2: Surge Forward Current Capability

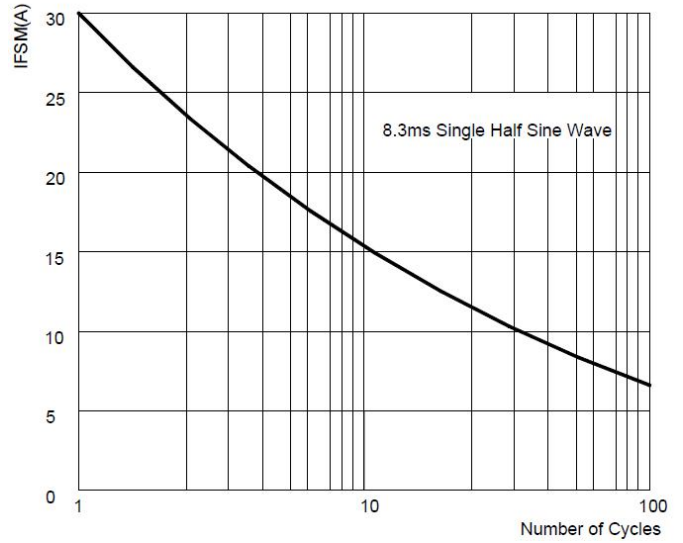


Fig 3: Instantaneous Forward Voltage

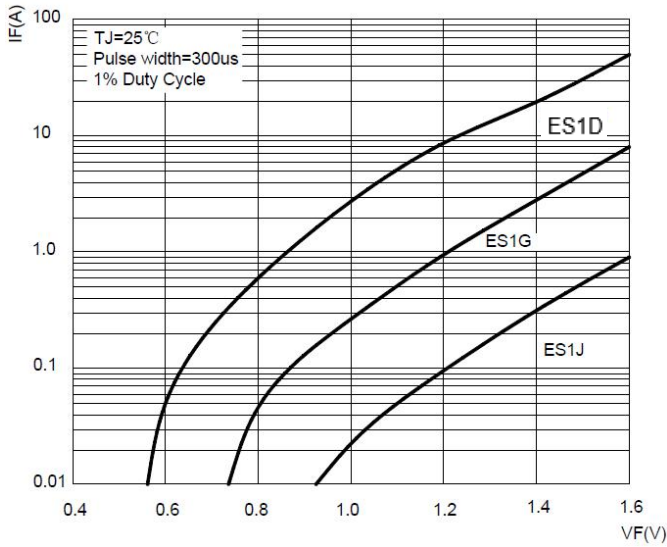


Fig 4: Typical Reverse Characteristics

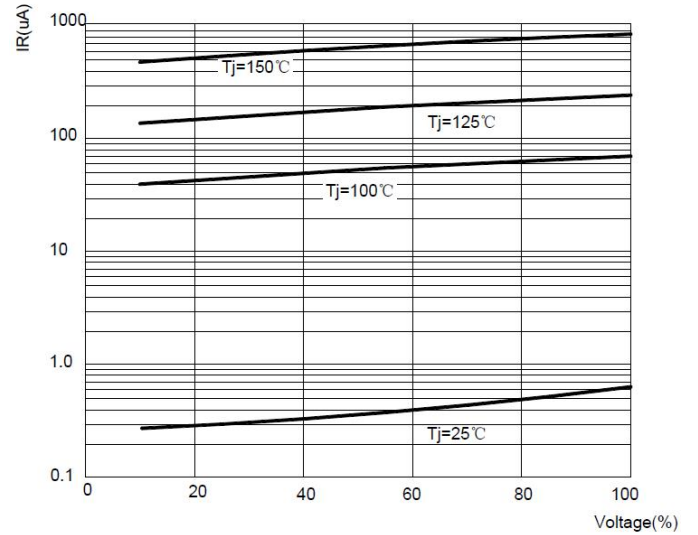
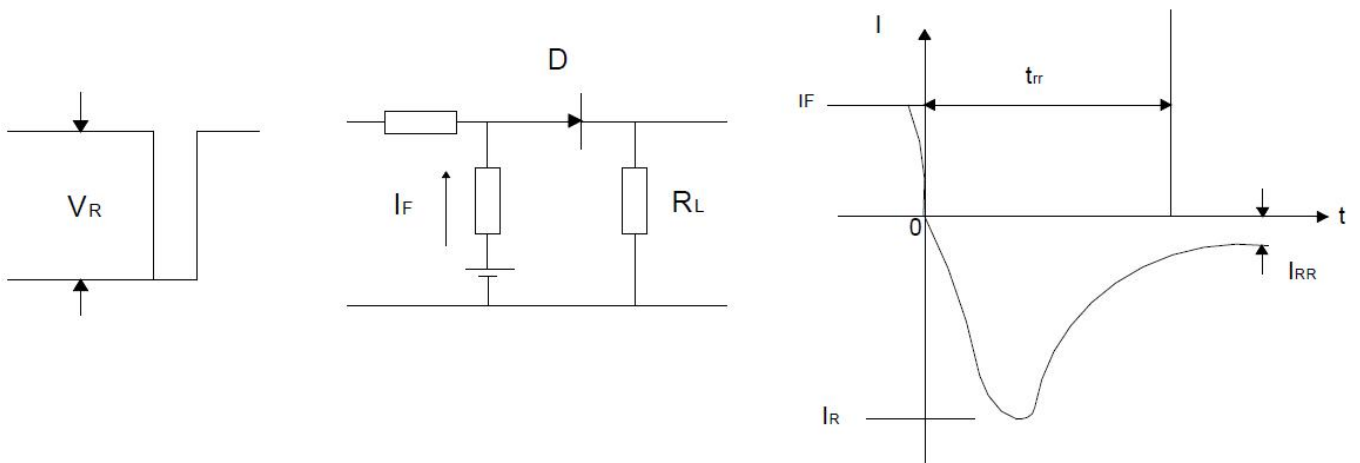
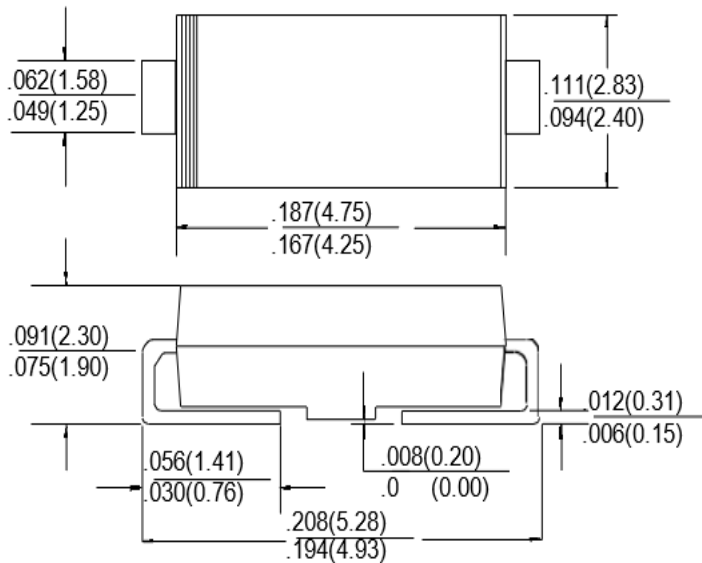


Fig 5: Diagram of circuit and Testing wave form of reverse recovery time

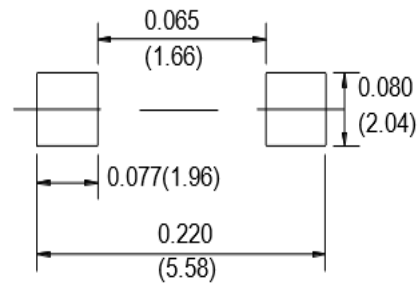


Package Outline Dimensions in inches (millimeters)

SMA(DO-214AC)



Mounting Pad Layout



Packing Information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SMA	12	4±0.1	0.1575±0.004	330	13	7,500

Marking information

- " ES1J " = Part No.
- " YWW " = Date Code Marking
- " Y " = Last digit of year (ex: 2 = 2022)
- " WW " = Week Code (ex: 24 = the 24th week of the year)
- Font type: Arial

