SEMICONDUCTOR

ES1D-V

Automotive Glass Passivated Super Fast Rectifier

Reverse Voltage - 200 Volts
Forward Current - 1.0Amperes
Reverse Recovery Time - 35ns

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated pellet chip junction
- Fast switching for high efficiency
- Low VF ,Low power loss
- High current capability
- High surge capability
- High temperature soldering guaranteed:260 ℃/10 seconds at terminals
  Component in accordance to RoHS 2015/863/EU
- AEC-Q101 qualified and PPAP capable

RoHS REACH IATF16949认证

AEC-Q101 Qualified

SMA(DO-214AC)

Mechanical Data

- Case: JEDEC SMA(DO-214AC) molded plastic body
- Terminals: Solder Plated, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.002ounce, 0.064 gram

Typical Applications

For use in high frequency inverters ,DC/DC converters,
free wheeling ,and polarity protection applications

Marking:

JF:Logo
xxxx:Date code
ES1D-V:Type

Maximum Ratings

(Ratings at 25 ℃ ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	200	V
Maximum average forward rectified current (see fig.1)	$I_{F(AV)}$	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	30	A
Operating junction temperature range	T_J	-55 to+150	℃
Storage temperature range	T_{stg}	-55 to+150	℃

Electrical Characteristcs (T_A=25℃ Unless otherwise noted)

Parameter	Test Conditions		Symbol	Min.	Typ.	Max .	Unit
Breakdown voltage Blocking voltage	IR=100μA		V_{BR} V_R	200	-	-	V
Instaneous forward voltage	TJ=25℃	IF=0.2A	V_F 1)	-	0.72	-	V
		IF=1.0A		-	0.86	0.95	
	TJ=125℃	IF=0.2A		-	0.58	-	
		IF=1.0A		-	0.74	0.82	
Reverse current	TJ=25℃	VR=200V	I_R 2)	-	-	2	μA
	TJ=125℃			-	-	100	
Junction capacitance	4V,1MHz		C_J	-	18	-	pF
Reverse Recovery Time	I_F=0.5A,I_{RR}=1.0A,I_{RR}=0.25A		Trr	-	-	35	ns

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle

2.Pulse test: pulse width ≤40ms

Thermal Characteristcs

Parameter	Symbol	ES1D-V	Unit
Typical thermal resistance 3)	RθJA	88.0	℃/W
	RθJL	35.0	

3.Mounted with 1.0" x 1.0" (25.4 mm x 25.4 mm) copper pad areas 1 oz FR4 Board

Availabale Pack Information

Product code	Pack	Reel Size (mm)	Quantity (pcs/reel)	Box Size L×W×H (mm)	Quantity (reel/box)	Carton Size L×W×H (mm)	Quantity (box/carton)
ES1D-V-SMA	T/R	Φ330	7500	330×35×333	2	364×364×360	8

Fig.1-Forward Current Derating Curve

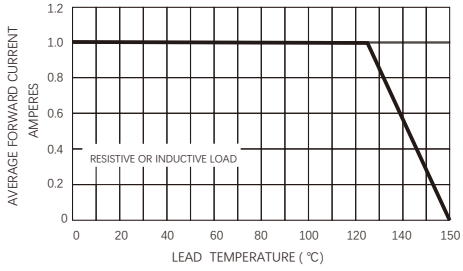


Fig.2-Maximum Non-repetitive Peak Forward Surge Current

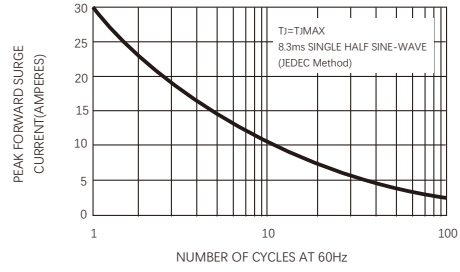


Fig.3-typical Instantaneous Forward Characteristics

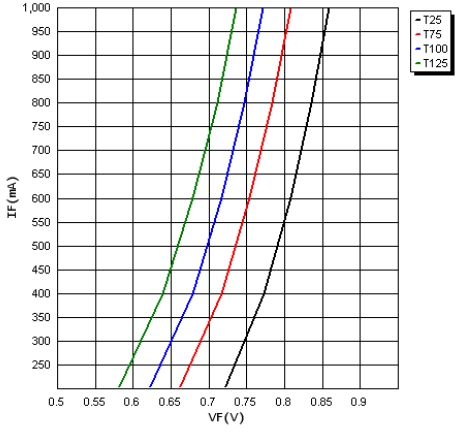


Fig.4-Typical Reverse Characteristics

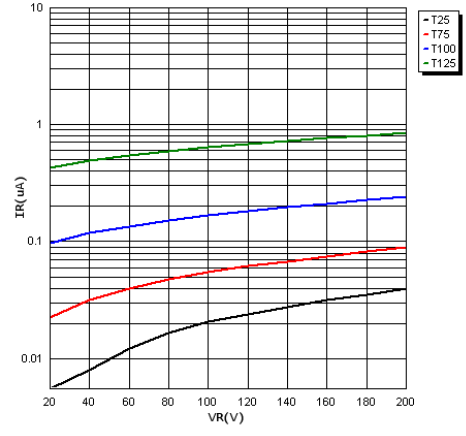
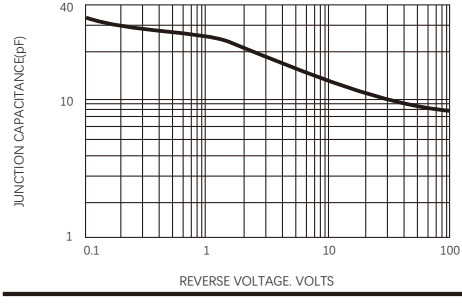
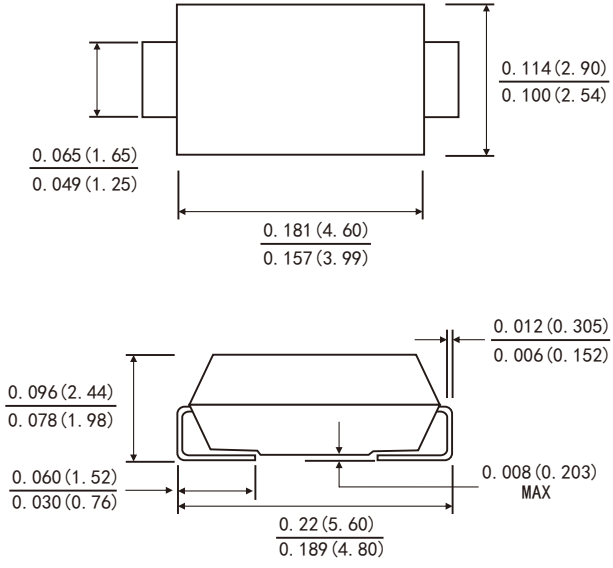


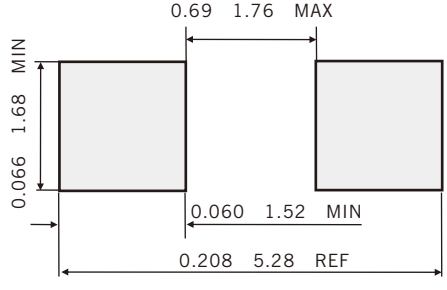
Fig.5-Typical Junction Capacitance



SMA(DO-214AC)



Suggested PAD Layout



Dimensions in inches and (millimeters)

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