

### 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 °C/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU
- AEC-Q101 qualified and PPAP capable



**AEC-Q101 Qualified**

### 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

SMA(DO-214AC)



### 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 °C 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	°C
Storage temperature range	$T_{stg}$	-55 to+150	°C

## Electrical Characteristics (T<sub>A</sub>=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	Min.	Typ.	Max .	Unit
Breakdown voltage Blocking voltage	I <sub>R</sub> =100μA		V <sub>BR</sub> V <sub>R</sub>	200	-	-	V
Instaneous forward voltage	T <sub>J</sub> =25°C	I <sub>F</sub> =0.2A	V <sub>F</sub> 1)	-	0.72	-	V
		I <sub>F</sub> =1.0A		-	0.86	0.95	
	T <sub>J</sub> =125°C	I <sub>F</sub> =0.2A		-	0.58	-	
		I <sub>F</sub> =1.0A		-	0.74	0.82	
Reverse current	T <sub>J</sub> =25°C	V <sub>R</sub> =200V	I <sub>R</sub> 2)	-	-	2	μA
	T <sub>J</sub> =125°C			-	-	100	
Junction capacitance	4V,1MHz		C <sub>J</sub>	-	18	-	pF
Reverse Recovery Time	I <sub>F</sub> =0.5A,I <sub>RR</sub> =1.0A,I <sub>RR</sub> =0.25A		T <sub>rr</sub>	-	-	35	ns

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

2.Pulse test: pulse width ≤40ms

## Thermal Characteristics

Parameter	Symbol	ES1D-V	Unit
Typical thermal resistance 3)	R <sub>θJA</sub>	88.0	°C/W
	R <sub>θJL</sub>	35.0	

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

## Availabile 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

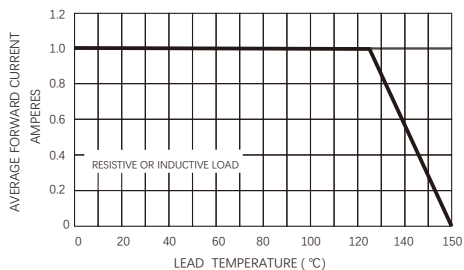


Fig.2-Maximum Non-repetitive Peak Forward Surge Current

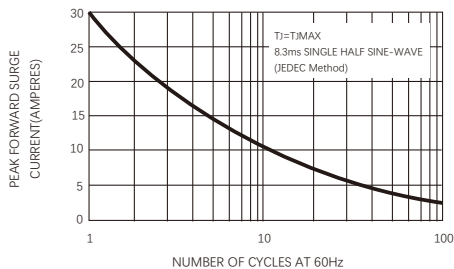


Fig.3-typical Instantaneous Forward Characteristics

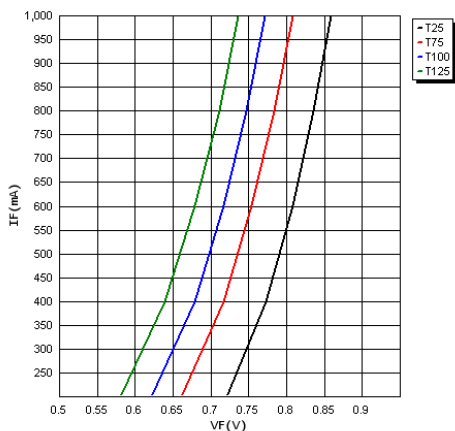


Fig.4-Typical Reverse Characteristics

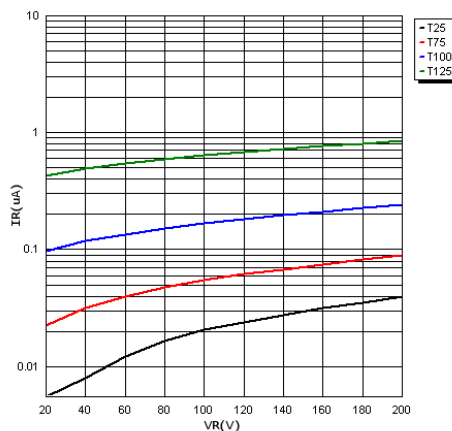
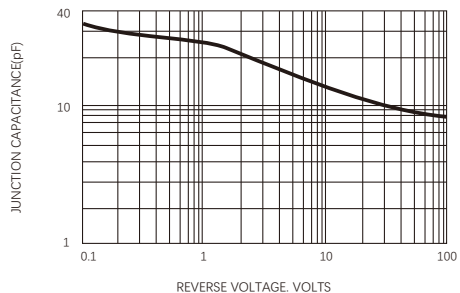
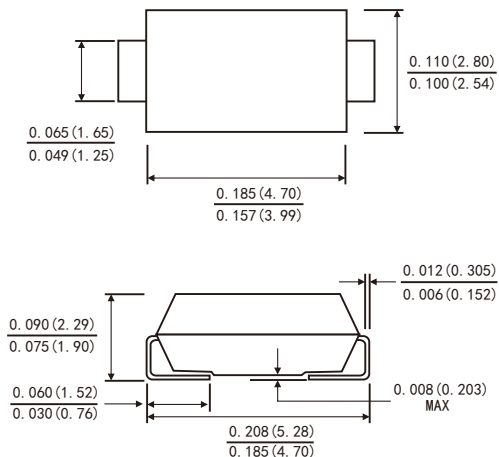


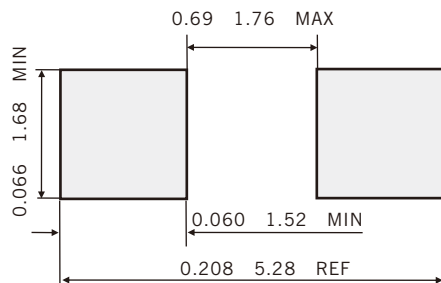
Fig.5-Typical Junction Capacitance



## SMA(DO-214AC)



## Suggested PAD Layout



Dimensions in inches and (millimeters)

## Friendship Reminder

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