

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Stable,High temperature,Glass passivated junction
- -V suffix for Automative and other applications requiring unique site and conctrol change requirments
- PPAP capable
- AEC-Q101 qualified
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



**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



CASE: SMA(DO-214AC)

MARKING:

JF-Logo

W-Work week

M-Work month

Y-Work year

S-Assembly loaction

M7-V: Device code

V: for automible

### TYPICAL APPLICATIONS

For use in high voltage rectifier,polarity protection,clamp applications

### MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified )

Parameters	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	1000	V
Maximum average forward rectified current	$I_{F(AV)}$	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

# RATINGS AND CHARACTERISTIC OF M7-V

## 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> =10μA	T <sub>J</sub> =25°C	V <sub>BR</sub> V <sub>R</sub>	1150	-	-	V
		T <sub>J</sub> =-55°C		1000	-	-	
Instaneous forward voltage	I <sub>F</sub> =1.0A	T <sub>J</sub> =-40°C	V <sub>F</sub> <sup>1)</sup>	-	-	1.20	V
		T <sub>J</sub> =25°C		-	0.95	1.00	
		T <sub>J</sub> =125°C		-	0.85	-	
Reverse current	V <sub>R</sub> =1000V	T <sub>J</sub> =25°C	I <sub>R</sub> <sup>2)</sup>	-	-	2	μA
		T <sub>J</sub> =100°C		-	-	50	
		T <sub>J</sub> =125°C		-	-	250	
Junction capacitance	4V, 1MHz		C <sub>J</sub>	-	6.0	-	pF

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

2.Pulse test: pulse width ≤ 40ms

## THERMAL CHARACTERISTICS

Parameter	Symbol	SMA	Unit
Typical thermal resistance <sup>3)</sup>	R <sub>θJA</sub>	88.0	°C/W
	R <sub>θJL</sub>	28.0	

3. P.C.B. mounted with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

## AVAILABLE 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)
M7-V-SMA	T/R	Φ330	5000	330×333×35	2	364×364×360	8

# RATINGS AND CHARACTERISTIC OF M7-V

FIG.1-FORWARD CURRENT DERATING CURVE

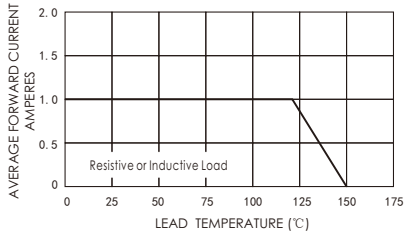


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

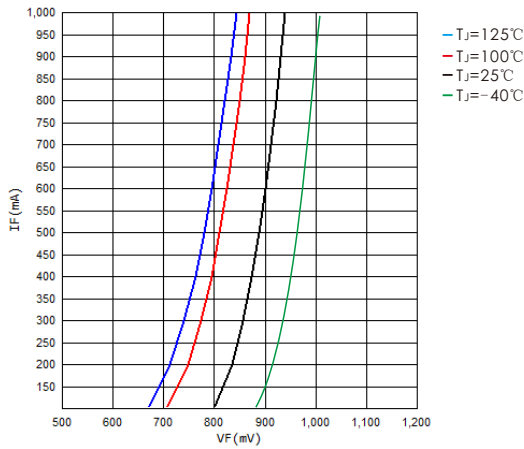


FIG.5-TYPICAL JUNCTION CAPACITANCE

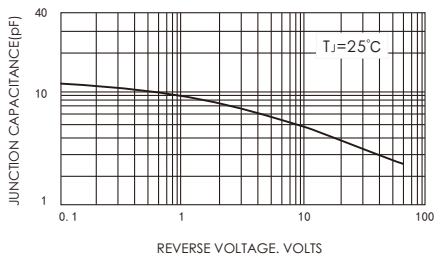


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

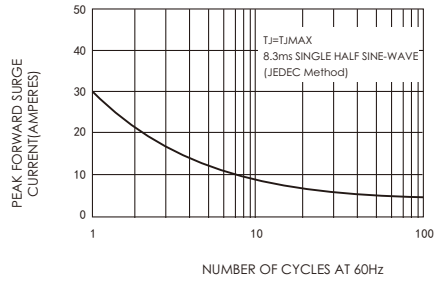
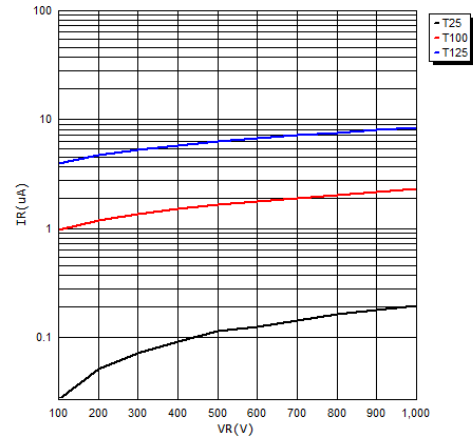
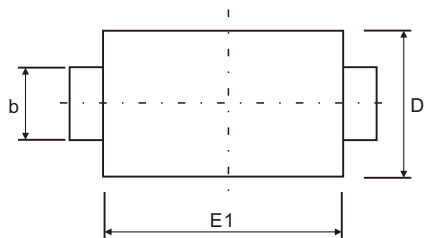


FIG.4-TYPICAL REVERSE CHARACTERISTICS

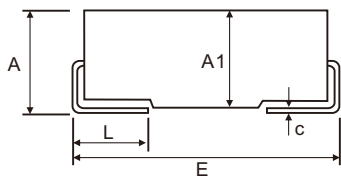


# PACKAGE OUTLINE DIMENSIONS

## SMA(DO-214AC)



Sym	Value(millimeters)		
	Min	Typ	Max
A	1.90	-	2.29
A1	1.83	-	2.16
b	1.25	-	1.65
c	0.15	-	0.31
D	2.40	-	2.80
E	4.70	-	5.28
E1	3.99	-	4.70
L	0.76	-	1.52



## Suggested PAD Layout

