

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Stable,High temperature,Glass passivated junction
- -V suffix for Automotive and other applications requiring unique site and control change requirments
- PPAP capable
- AEC-Q101 qualified
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU



AEC-Q101 Qualified

MECHANICAL DATA

- Case: SMAF molded plastic body
- Terminals: Solder Plated, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.028 gram



TYPICAL APPLICATIONS

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

CASE: SMAF

MARKING:

JF-Logo

W-Work week

M-Work month

Y-Work year

S-Assembly loaction

S3JS: Device code

V: for automobile

MAXIMUM RATINGS

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

Parameters	Symbol	Conditions	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}		600	V
Maximum average forward rectified current	$I_{F(AV)}$	50Hz half sine wave, Resistance load, $T_L=91^{\circ}\text{C}$	3.5	A
		50Hz half sine wave, Resistance load, $T_L=98^{\circ}\text{C}$	3.0	
		50Hz square wave, Resistance load, $T_A=25^{\circ}\text{C}$	3.9	
		50Hz Rectangular wave, $D=0.05$,Resistance load, $T_A=25^{\circ}\text{C}$	1.2	
Forward surge current	I_{FSM}	Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T_L)	60	A
Operating junction temperature range	T_J		-55 to+150	$^{\circ}\text{C}$
Storage temperature range	T_{stg}		-55 to+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS (T_A=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	I _F =3.5A	T _J =25°C	V _F ¹⁾	-	1.10	V
		T _J =125°C		-	-	
Reverse current	V _R =600V	T _J =25°C	I _R ²⁾	-	5.0	μA
		T _J =125°C		-	100	
Typical junction capacitance	4V,1MHz		C _J	21	-	pF

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

2.Pulse test: pulse width ≤40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	SMAF	Unit
Typical thermal resistance ³⁾	R _{θJA}	120	°C/W
	R _{θJL}	15	

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)
S3JS-V -SMAF	T/R	Φ178	3000	180×73×180	2	380×380×200	10

FIG.1-FORWARD CURRENT DERATING CURVE

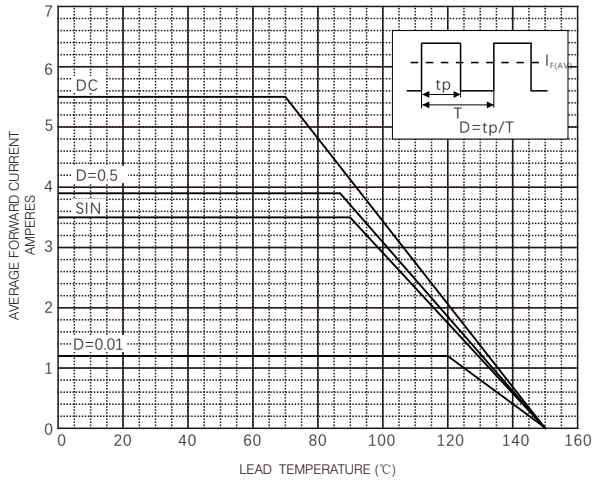


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

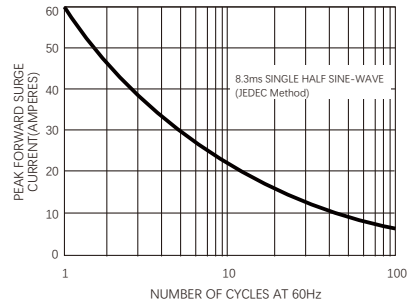


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

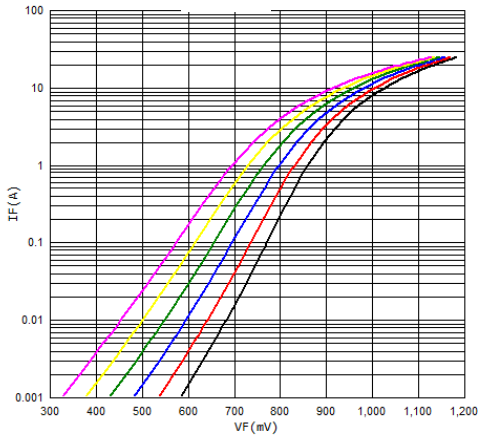


FIG.4-TYPICAL REVERSE CHARACTERISTICS

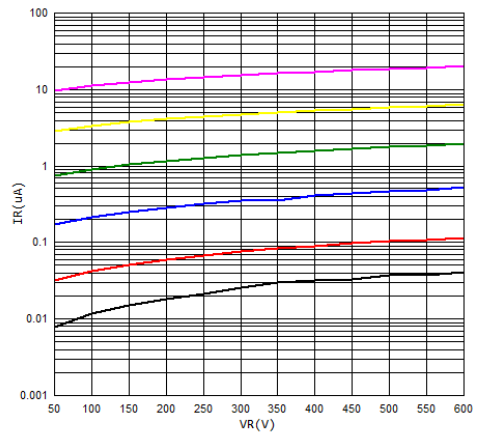


FIG.5-FORWARD POWER DISSIPATION CURVE

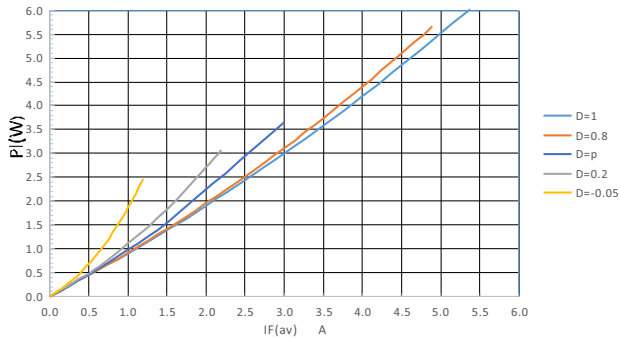
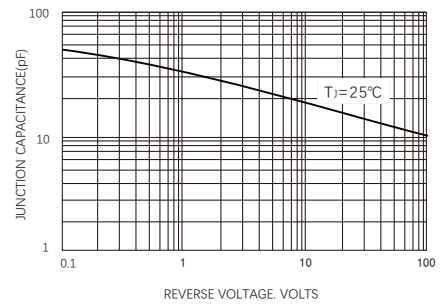
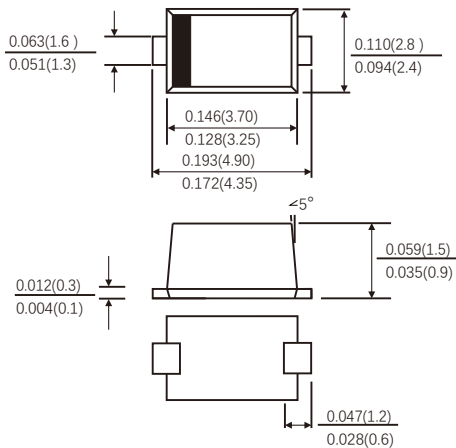


FIG.6-TYPICAL JUNCTION CAPACITANCE

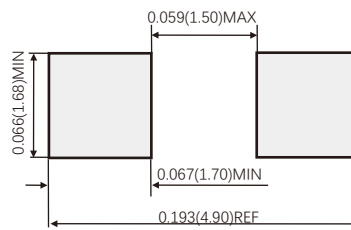


PACKAGE OUTLINE DIMENSIONS

SMAF



Suggested PAD Layout



Dimensions in inches and (millimeters)

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