

DO-214AC(SMA)

Dimensions in inches and (millimeters)



Ordering Information	
Part Number	Remark
SM5XXA	General
SM5XXA-H	Halogen Free
SM5XXA-Q	Automotive

PRIMARY CHARACTERISTICS	
I_F	5A
V_{RRM}	20~200V
I_{FSM}	100A
V_F	0.55V, 0.70V, 0.85V, 0.87V, 0.90V
T_J max	125°C, 150°C

Features

- Low profile package
- Ideal for automated placement
- Guard Ring for over voltage protection
- Low forward voltage drop
- Component in accordance to RoHS 2002/95/EC
- AEC-Q101 qualified

Mechanical Date

- Case: DO-214AC (SMA)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead Free Plating (Tin Finish). Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.062 grams (approximate)

MAXIMUM RATINGS (TA=25°C unless otherwise noted)

PARAMETER	SYMBOL	SM 520A	SM 530A	SM 540A	SM 550A	SM 560A	SM 580A	SM 5100A	SM 5150A	SM 5200A	UNIT	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	V	
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	V	
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	150	200	V	
Maximum average forward rectified current	I_F	5.0									A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	100.0									A	
Maximum Instantaneous Forward Voltage IF=5A @ 25°C	V_F	0.55		0.70		0.85		0.87	0.90		V	
Maximum DC Reverse Current @ Tc=25°C at Rated DC Blocking Voltage @ Tc=100°C	I_R	0.5			10			0.2		5.0		mA
Typical Junction Capacitance(NOTE1)	C_j	300		210		170		150	110		pF	
Typical Thermal Resistance(NOTE2)	$R_{\theta Ja}$ $R_{\theta Jc}$	100 80									°C/W	
Operating Temperature Range	T_J	-55 to +125					-55 to +150					°C
Storage Temperature Range	T_{STG}	-55 to +150										°C

NOTES:

1. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC
2. Device mounted on FR-4 substrate, 1"*1", 2oz, single-sided, PC boards with 0.1"*0.15" copper pad.

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

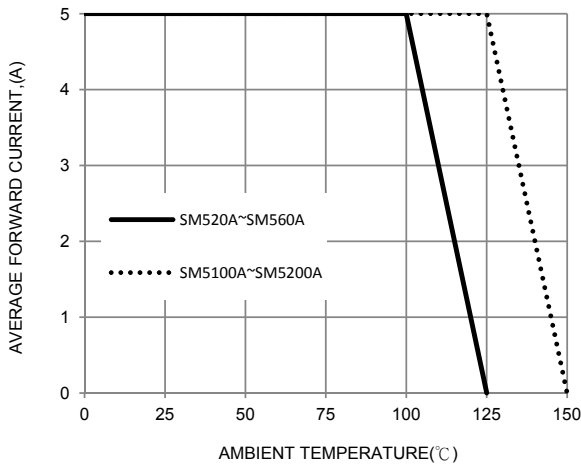


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

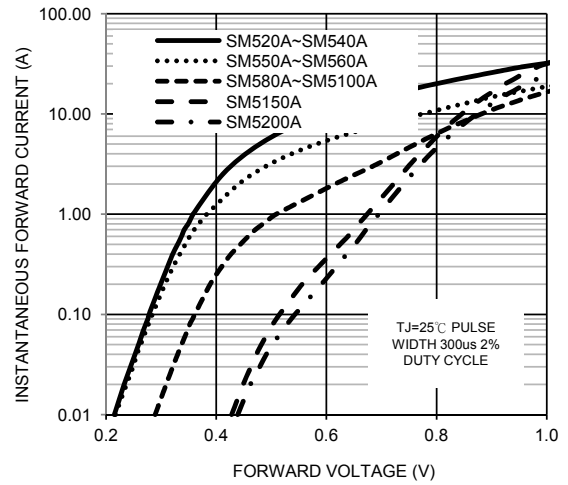


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

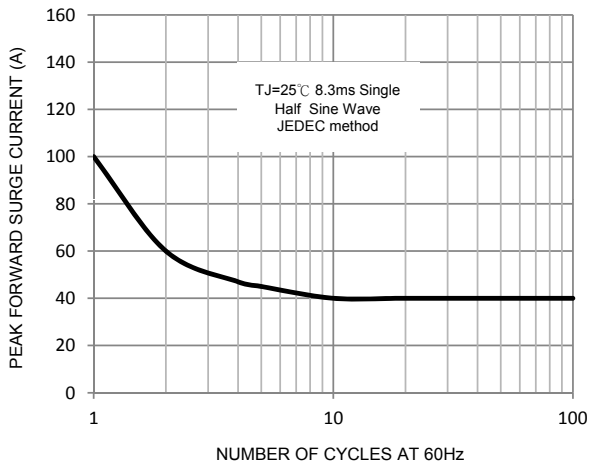


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

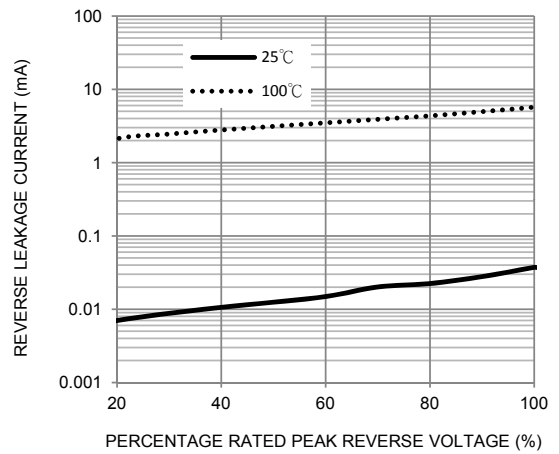


FIG. 5-TYPICAL JUNCTION CAPACITANCE

