Elektronische Bauelemente

SMF101A ~ SMF107A

50 ~ 1000 V

1.0 Amp Surface Mount Silicon Fast Recovery Rectifiers

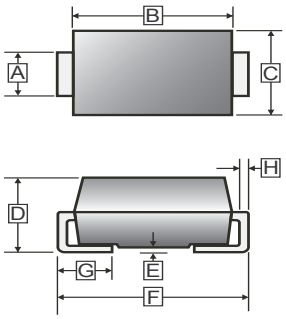
RoHS Compliant Product

A suffix of "-C" specifies halogen-free and RoHS Compliant

FEATURES

- Surface mount device
- High surge current capability
- Low reverse current
- Component in accordance to RoHS 2002/95/EC

SMA



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.24	1.65	E	-	0.203
B	3.99	4.60	F	4.80	5.28
C	2.40	2.90	G	0.76	1.52
D	1.90	2.44	H	0.15	0.305

MECHANICAL DATA

- Cases：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：0.064 grams(approximate)

PACKAGE INFORMATION

Package	MPQ	Leader Size
SMA	5K	13 inch

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, de-rate current by 20%)

Parameter		Symbol	Part Number							Unit
			SMF 101A	SMF 102A	SMF 103A	SMF 104A	SMF 105A	SMF 106A	SMF 107A	
Maximum repetitive peak reverse voltage		V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage		V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage		V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current T_A=55°C		I_F	1							A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	30							A
Maximum Instantaneous Forward Voltage @ 1A		V_F	1.3							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_J=25°C	I_R	5							μA
	T_J =125°C		100							
Typical Junction Capacitance [1]		C_J	15							pF
Maximum Reverse Recovery Time[2]		Trr	150				250	500		ns
Thermal Resistance, Junction to Ambient		$R_{\theta JA}$	105							°C/W
Thermal Resistance, Junction to Lead		$R_{\theta JL}$	32							°C/W
Storage and Operating Temperature Range		T_{STG}, T_J	-55 ~ 150							°C

NOTES:

1. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C.
2. Measured with IF=0.5A, IR=1A, IRR=0.25A

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CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

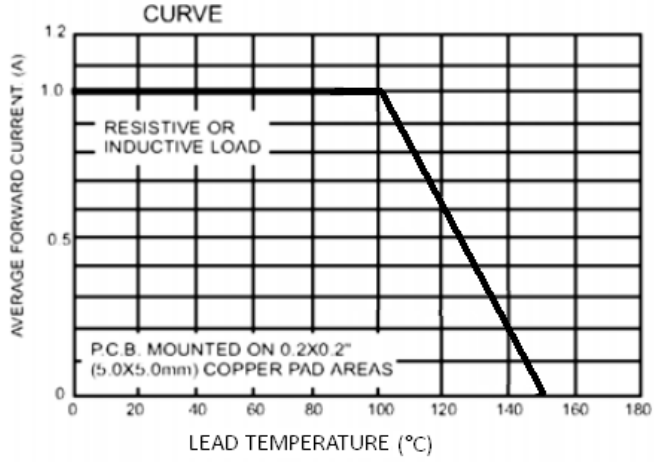

FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

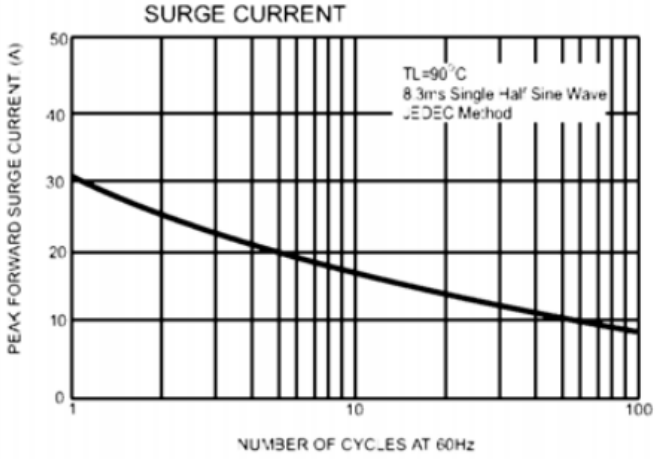

FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

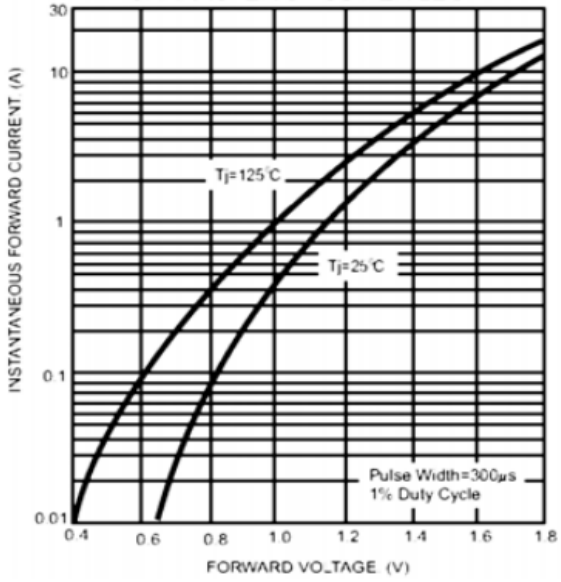

FIG.4- TYPICAL REVERSE CHARACTERISTICS

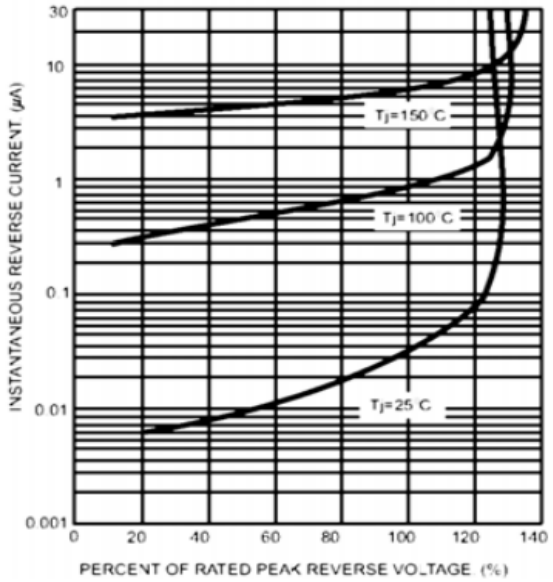

FIG.5- TYPICAL JUNCTION CAPACITANCE