Elektronische Bauelemente

SMF501C ~ SMF507C

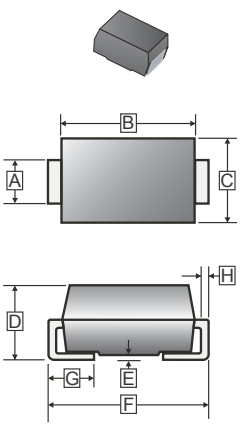
50 V ~ 1000 V
5.0 Amp Surface Mount Silicon
Fast Recovery Rectifiers

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

SMC



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.750	3.250	E	-	0.203
B	6.520	7.110	F	7.750	8.130
C	5.590	6.220	G	0.760	1.520
D	2.000	2.620	H	0.150	0.305

MECHANICAL DATA

- Cases：DO-214AB(SMC)
- 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：0.231 grams(approximate)

PACKAGE INFORMATION

Package	MPQ	Leader Size
SMC	3K	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 501C	SMF 502C	SMF 503C	SMF 504C	SMF 505C	SMF 506C	SMF 507C	
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	I_F	5							A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	100							A
Maximum Instantaneous Forward Voltage @ 5.0A	V_F	1.3							V
Maximum DC Reverse Current at Rated DC Blocking Voltage T_A=25°C	I_R	10							μA
Maximum DC Reverse Current at Rated DC Blocking Voltage T_A=100°C	I_R	100							μA
Typical Junction Capacitance [1]	C_J	50							pF
Maximum Reverse Recovery Time [2]	Trr	150				250	500		ns
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	50							°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.

CHARACTERISTIC CURVES

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

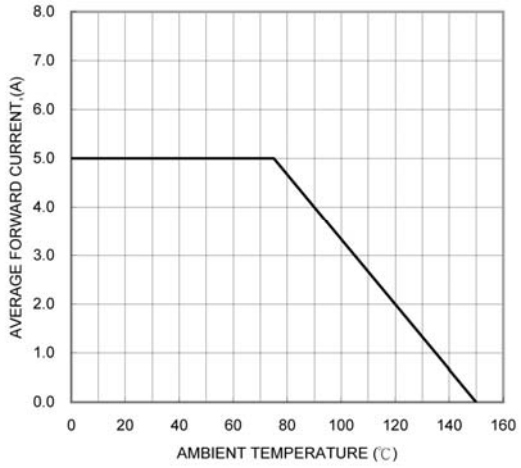


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

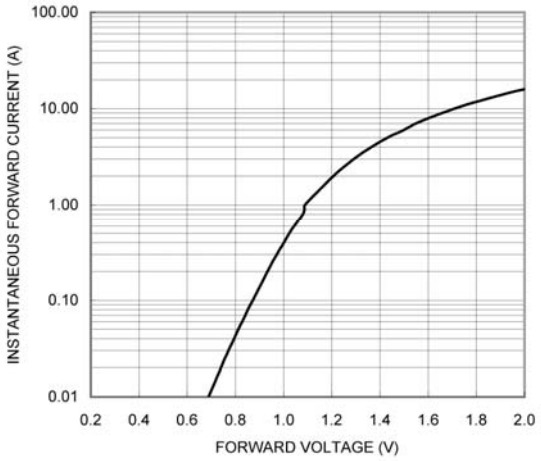


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

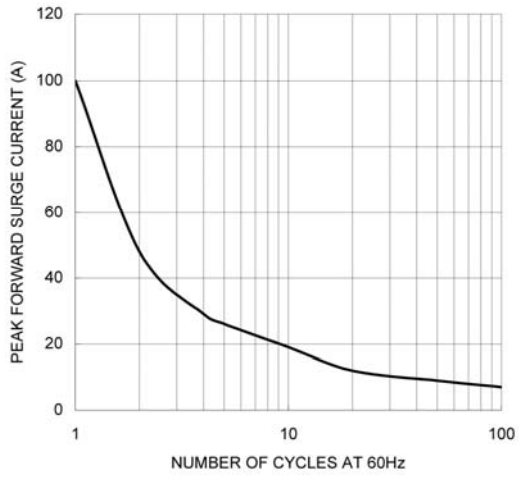


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

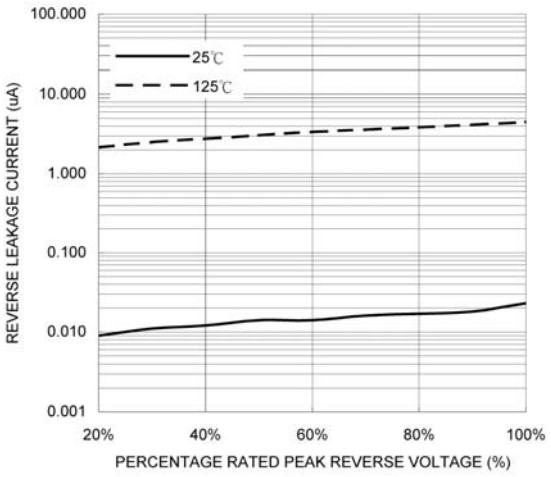


FIG. 5-TYPICAL JUNCTION CAPACITANCE

