Elektronische Bauelemente

ES45C

4.0 Amp ,600V

Surface Mount Silicon Fast Recovery Rectifiers

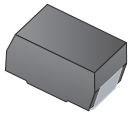
RoHS Compliant Product

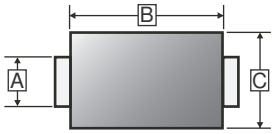
A suffix of “-C” specifies halogen-free and RoHS Compliant

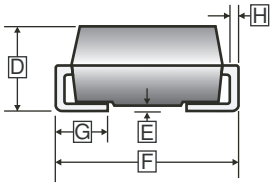
FEATURES

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

SMC







MECHANICAL DATA

- Cases: SMC
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead Free Plating(Tin Finish) Solderable Per MIL-STD-202, Method 208
- Mounting position: Any
- Polarity: Color band denotes cathode

PACKAGE INFORMATION

Package	MPQ	Leader Size
SMC	3K	13’ inch

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.750	3.250	E	-	0.203
B	6.520	7.110	F	7.640	8.130
C	5.50	6.220	G	0.750	1.520
D	1.980	2.620	H	0.150	0.305

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	Rating	Unit
Maximum repetitive peak reverse voltage		V_{RRM}	600	V
Maximum Peak Reverse Voltage		V_{RWM}	420	V
Maximum DC blocking voltage		V_{DC}	600	V
Maximum average forward rectified current@ T_A=75℃		I_F	4	A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	150	A
Maximum Instantaneous Forward Voltage	I_F=4A	V_F	1.28	V
	I_F=3A		1.25	
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_J=25℃	I_R	10	μA
	T_J=150℃		250	
Maximum Reverse Recovery Time [1]		Trr	50	nS
Storage and Operating Temperature Range		T_{STG}, T_J	-65~175	℃

Notes:

1. Measured with I_F=0.5A, I_R=1A, Irr=0.25A.

CHARACTERISTIC CURVES

FIG.1 FORWARD CURRENT DERATING CURVE

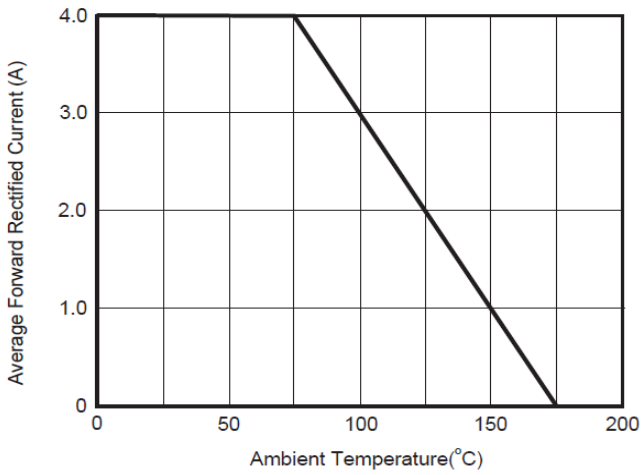


FIG.2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

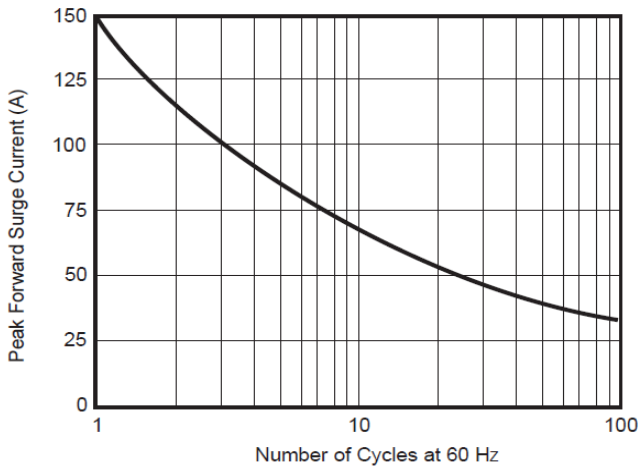


FIG. 3 TYPICSL INSTANTANEOUS FORWARD CHARACTERISTICS

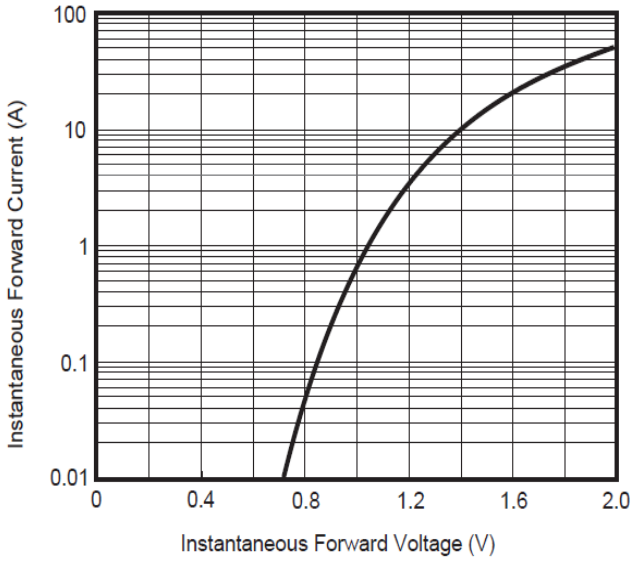
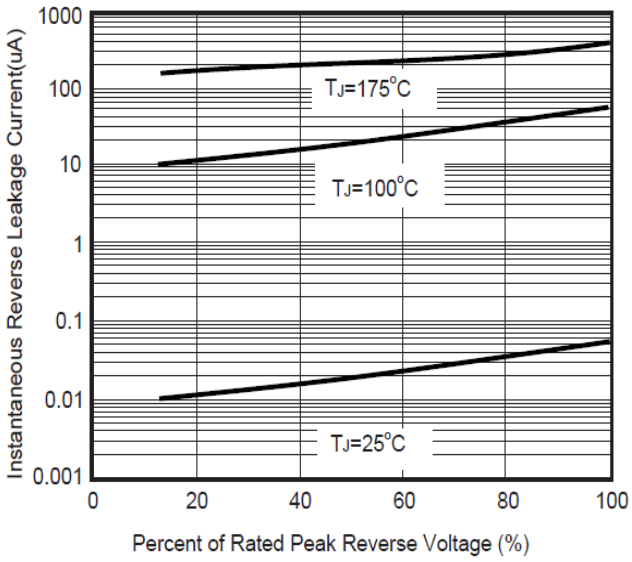



FIG 4. TYPICAL REVERSE CHARACTERISTICS