

S3ACAT THRU S3MCAT

SURFACE MOUNT GENERAL PURPOSE SILICON RECTIFIERS

Forward Current-3.0A

Reverse Voltage-50V to 1000V

FEATURES

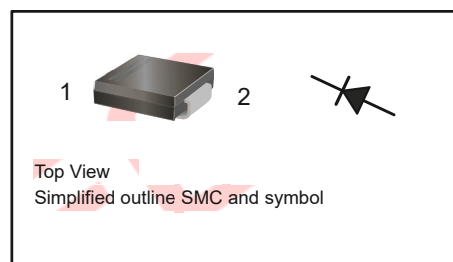
- ◆ For surface mount applications
- ◆ Glass passivated chip junction
- ◆ Low profile package
- ◆ Easy to pick and place
- ◆ Lead free in comply with EU RoHS2011/65/EU directives

MECHANICAL DATA

- ◆ Case: SMC molded plastic body
- ◆ Terminals: Solderable per MIL-STD-750 , Method 2026
- ◆ Weight: Approximated 0.022 grams

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derating by 20 %.

PARAMETER	SYMBOL	S3ACAT	S3BCAT	S3DCAT	S3GCAT	S3JCAT	S3KCAT	S3MCAT	UNIT
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 at $T_C=125^{\circ}C$	$I_{F(AV)}$	3.0							A
Peak Forward Surge Current (Note1)	I_{FSM}	180							A
Maximum Forward Voltage at 3.0 A	V_F	1.0							V
Maximum DC Reverse Current at Rated DC Blocking Voltage at $T_A=25^{\circ}C$ $T_A=125^{\circ}C$	I_R	5 150							uA
Typical Junction Capacitance (Note2)	C_J	40							pF
Typical Thermal Resistance (Note3)	$R_{\theta JA}$ $R_{\theta JC}$	40 16							$^{\circ}C/W$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^{\circ}C$

Notes: 1. Measured at 8.3 ms single half sine wave superimposed on rated load (JEDEC Method).

2. Measured at 1MHz and applied reverse voltage of 4 V D.C.

3. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Dated: 06/2016

Rev: 1.0

S3ACAT THRU S3MCAT

RATINGS AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

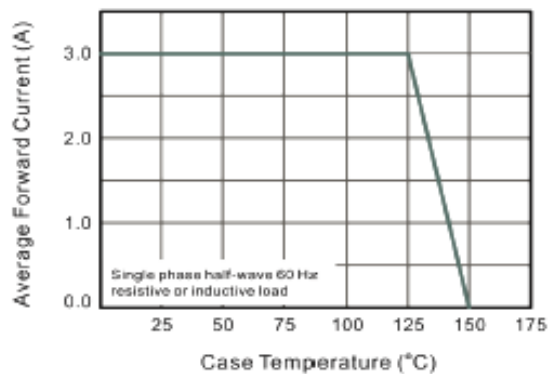


Fig.2 Typical Reverse Characteristics

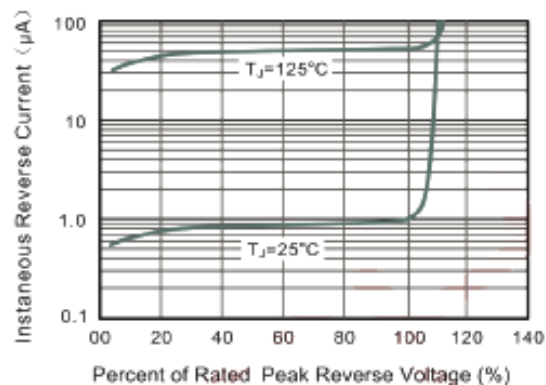


Fig.3 Typical Forward Characteristics

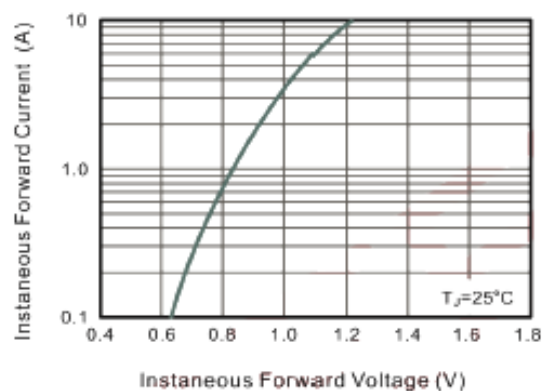


Fig.4 Typical Junction Capacitance

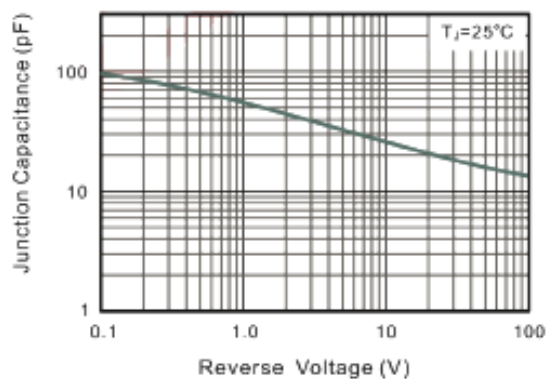
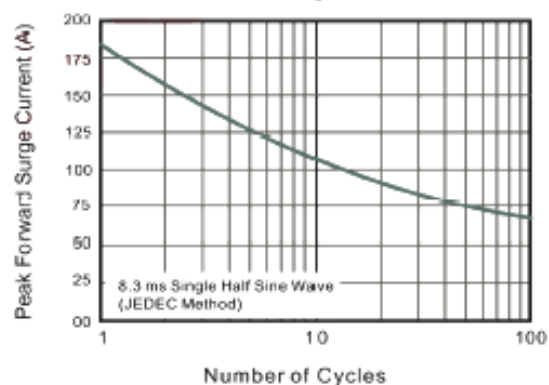


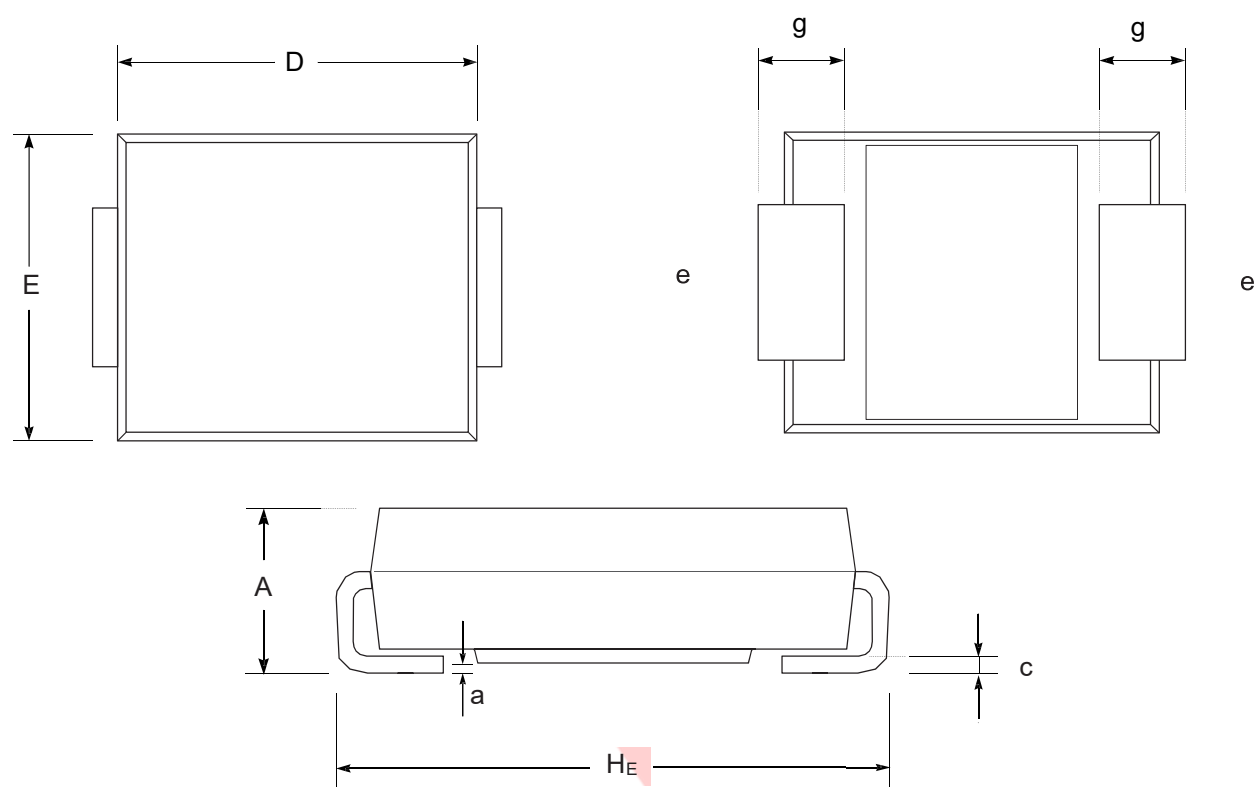
Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



S3ACAT THRU S3MCAT

PACKAGE OUTLINE

SMC



UNIT		A	D	E	H _E	a	c	e	g
mm	max	2.5	7.0	6.0	8.1	0.21	0.35	3.1	1.5
	min	2.1	6.7	5.7	7.7	0.05	0.25	2.9	0.9
mil	max	98	276	236	319	8.3	14	122	59
	min	82	264	224	303	2.0	10	114	35

ORDERING INFORMATION

Device	Package	Shipping
S3ACAT thru S3MCAT	SMC	3,000/ Tape & Reel (13 inches)