KEEN SIDE electronics

SK52C–SK520C

Surface Mount Schottky Barrier Rectifier
Reverse Voltage - 20 to 200V
Forward Current - 5.0A

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

Top View
Marking Code: SS52 ~ SS520
Simplified outline SMC and symbol

FEATURES

- **Metal silicon junction, majority carrier conduction**
- **For surface mounted applications**
- **Low power loss, high efficiency**
- **High forward surge current capability**
- **For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications**

MECHANICAL DATA

- Case: SMC
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.22g / 0.0077oz

Absolute Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbols	SK52C	SK54C	SK56C	SK58C	SK510C	SK512C	SK515C	SK520C	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	40	60	80	100	120	150	200	V
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	84	105	140	V
Maximum DC Blocking Voltage	V_{DC}	20	40	60	80	100	120	150	200	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5.0								A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	175				150				A
Max Instantaneous Forward Voltage at 5 A	V_F	0.55		0.70		0.85				V
Maximum DC Reverse Current **T_a = 25 °C** at Rated DC Reverse Voltage T_a =100 °C	I_R	1.0 50								mA
Typical Junction Capacitance (1)	C_j	600		400						pF
Typical Thermal Resistance (2)	$R_{\theta JA}$	35								°C/W
Operating Junction Temperature Range	T_j	-55 ~ +150								°C
Storage Temperature Range	T_{stg}	-55 ~ +150								°C

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C
(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Fig.1 Forward Current Derating Curve

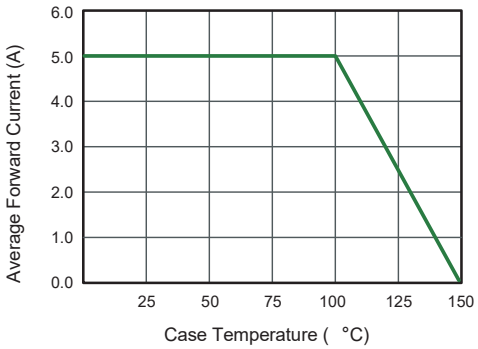


Fig.2 Typical Reverse Characteristics

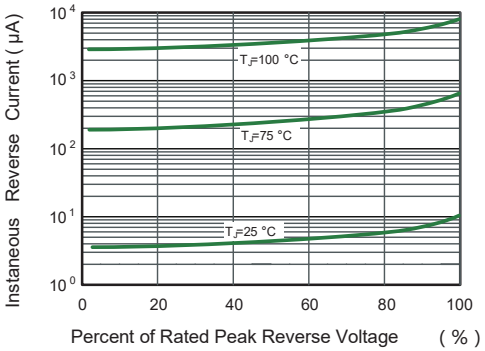


Fig.3 Typical Forward Characteristic

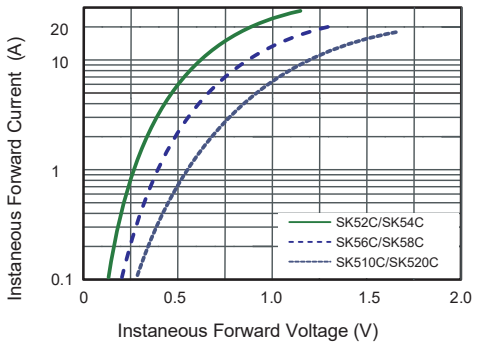


Fig.4 Typical Junction Capacitance

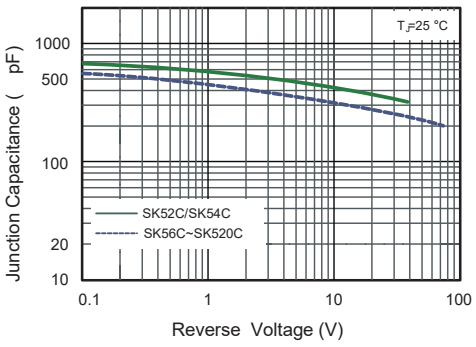


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

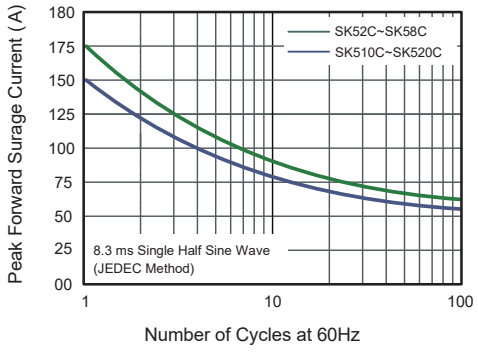
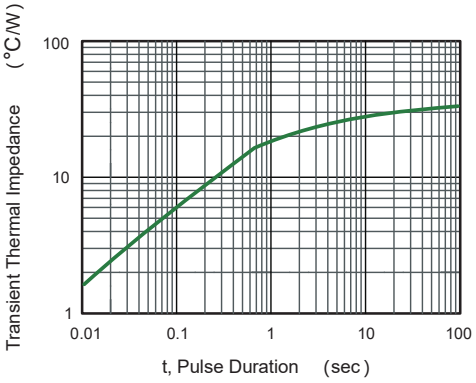
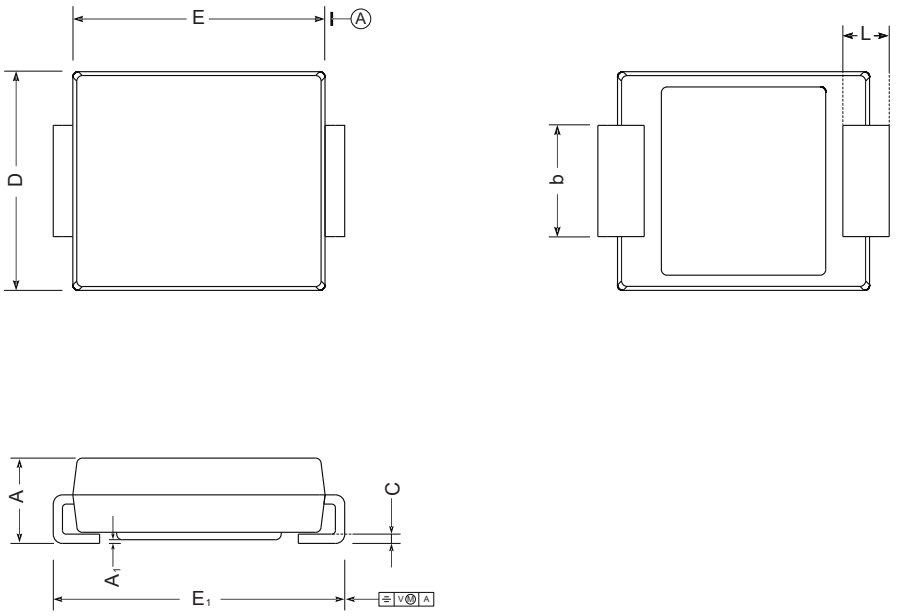


Fig.6- Typical Transient Thermal Impedance



PACKAGE OUTLINE

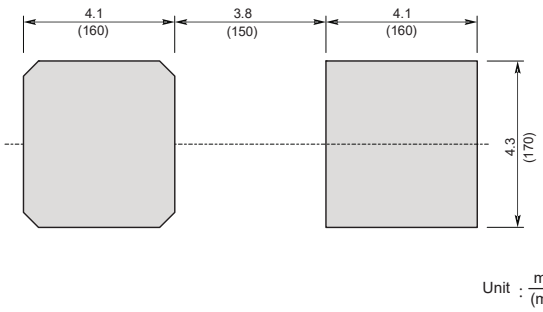
Plastic surface mounted package; 2 leads



SMC mechanical data

UNIT		A	E	D	E_1	A_1	C	L	b
mm	max	2.62	7.0	6.2	8.0	0.21	0.31	1.6	3.25
	min	2.00	6.5	5.6	7.6	0.05	0.15	0.9	2.75
mil	max	103	276	244	315	8.3	12	63	128
	min	79	256	220	299	2.0	5.9	35	108

The recommended mounting pad size



Marking

Type number	Marking code
SK52C	SS52
SK54C	SS54
SK56C	SS56
SK58C	SS58
SK510C	SS510
SK512C	SS512
SK515C	SS515
SK520C	SS520