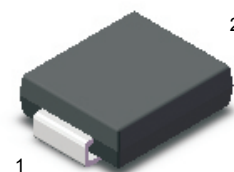


Surface Mount General Purpose Silicon Rectifiers

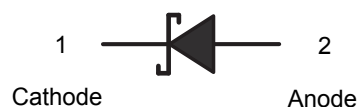
FEATURES

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Lead free in comply with EU RoHS 2011/65/EU directives

SMA



CIRCUIT DIAGRAM



MECHANICAL DATA

- Case: SMA
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 55mg / 0.002oz

MARKING

Type number	Marking code
SM520	SM520

Absolute 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 derate by 20 %.

Parameter	Symbols	SM520	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	2000	V
Maximum RMS voltage	V_{RMS}	1400	V
Maximum DC blocking voltage	V_{DC}	2000	V
Maximum Average Forward Rectified Current at $T_c = 100\text{ °C}$	$I_{F(AV)}$	1.5	A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	50	A
Maximum Instantaneous Forward Voltage at 1.5 A	V_F	1.15	V
Maximum Reverse Current $T_J = 25\text{ °C}$ $T_J = 125\text{ °C}$	I_R	5 50	μA
Typical Junction Capacitance ¹⁾	C_j	20	pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	95	°C/W
Operating and Storage Temperature Range	T_J, 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.

TYPICAL CHARACTERISTICS

Fig.1 Forward Current Derating Curve

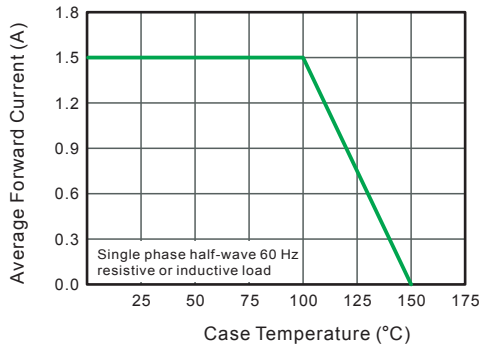


Fig.2 Typical Reverse Characteristics

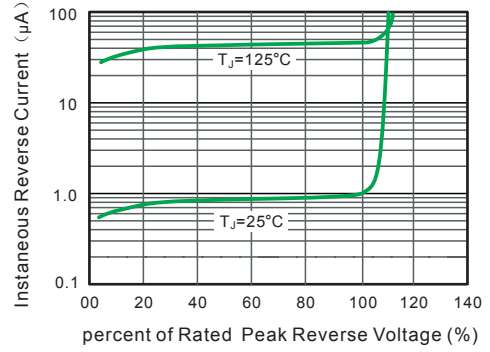


Fig.3 Typical Instantaneous Forward Characteristics

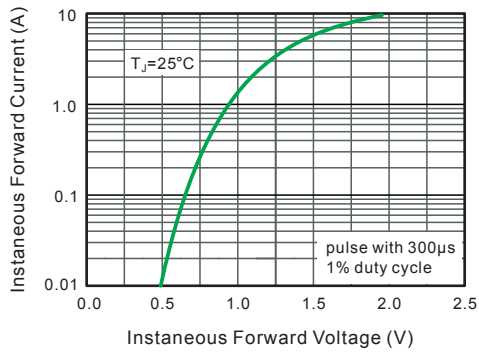


Fig.4 Typical Junction Capacitance

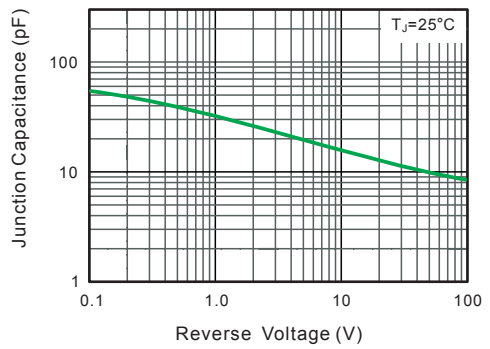
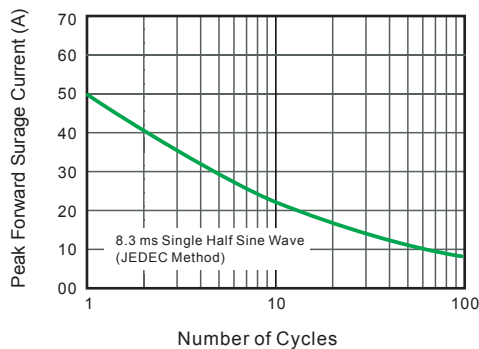
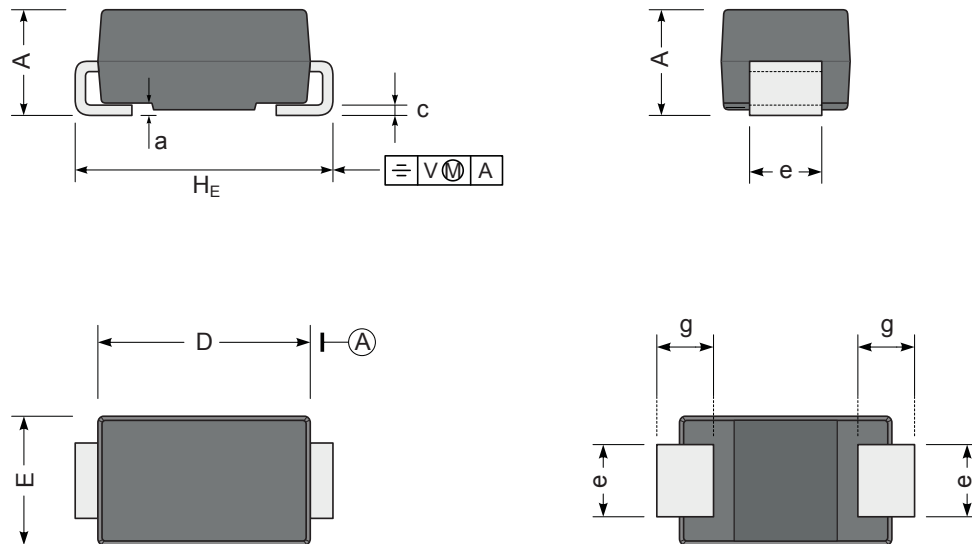


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



SMA PACKAGE OUTLINE DRAWING



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.9	2.2	0.075	0.087
D	4.0	4.5	0.157	0.181
E	2.3	2.7	0.091	0.106
HE	4.7	5.2	0.185	0.205
c	0.15	0.31	0.006	0.012
e	1.3	1.6	0.051	0.063
g	0.9	1.5	0.035	0.059
a	0.3		12	