

RS6DCG THRU RS6MCG

Surface Mount Fast Recovery Rectifiers

Reverse Voltage - 200 to 1000 V

Forward Current - 6 A

FEATURES

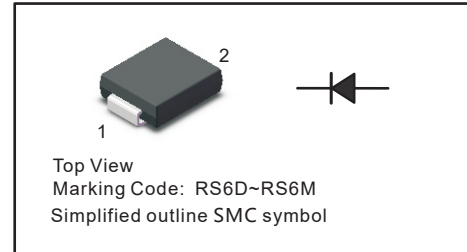
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

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

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Absolute Maximum Ratings and Characteristics

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

Parameter	Symbols	RS6DCG	RS6GCG	RS6JCG	RS6MCG	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	400	600	1000	V
Maximum RMS voltage	V_{RMS}	140	280	420	700	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	1000	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	6				A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	120				A
Maximum Forward Voltage at 6 A	V_F	1.3				V
Maximum DC Reverse Current $T_a = 25\text{ °C}$ at Rated DC Blocking Voltage $T_a = 125\text{ °C}$	I_R	5 100				μA
Typical Junction Capacitance at $V_R=4V$, $f=1MHz$	C_j	50				pF
Maximum Reverse Recovery Time ⁽¹⁾	t_{rr}	150		250	500	ns
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$ $R_{\theta JC}$	40 13				°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150				°C

(1) Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $t_{rr} = 0.25\text{ A}$.

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



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Fig.1 Forward Current Derating Curve

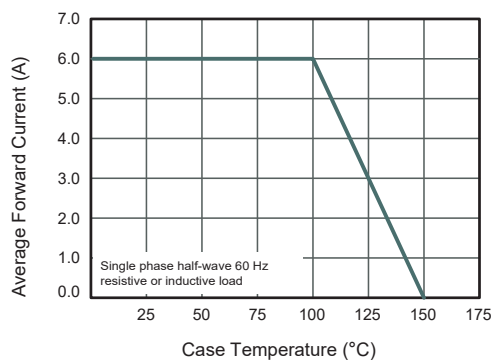


Fig.2 Typical Reverse Characteristics

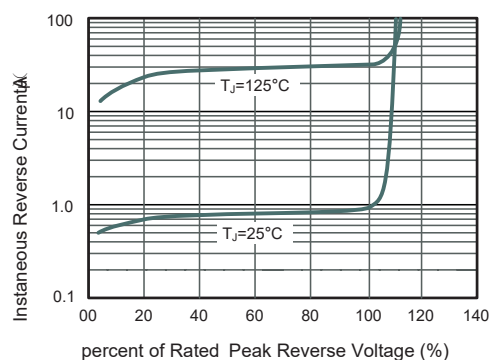


Fig.3 Typical Instantaneous Forward Characteristics

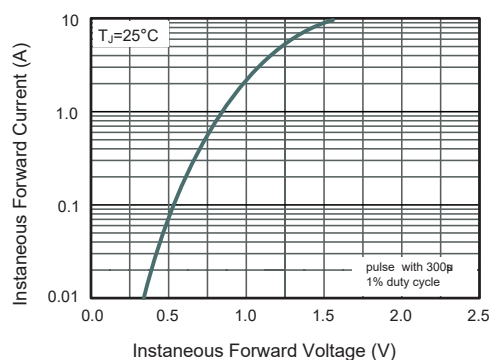


Fig.4 Typical Junction Capacitance

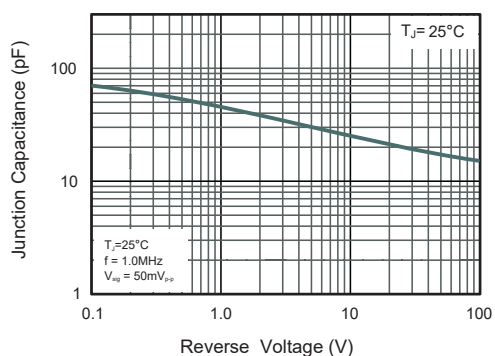
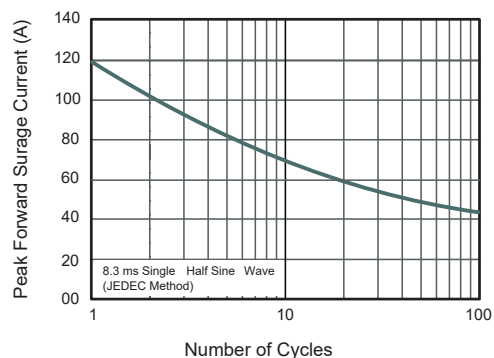


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



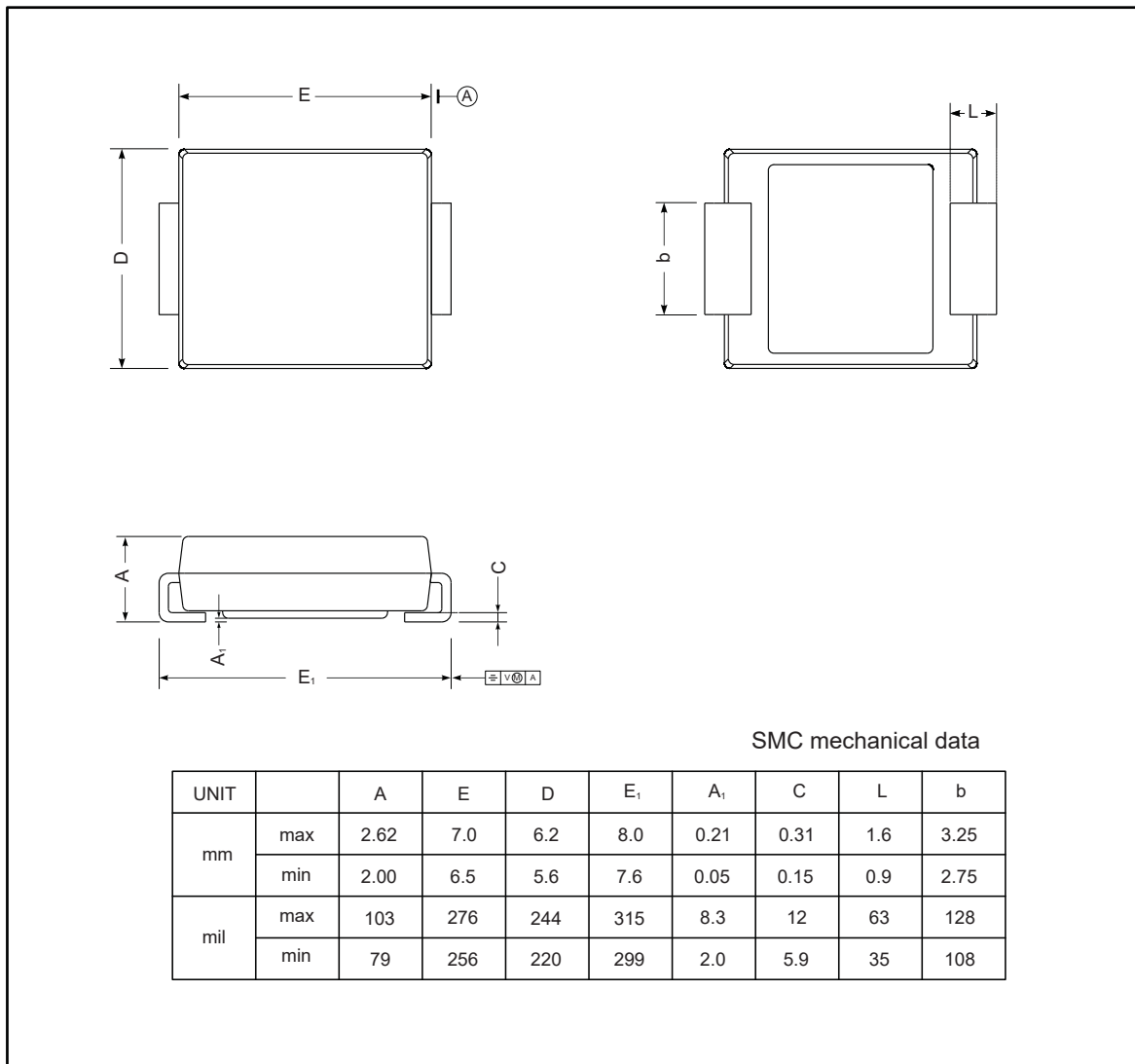


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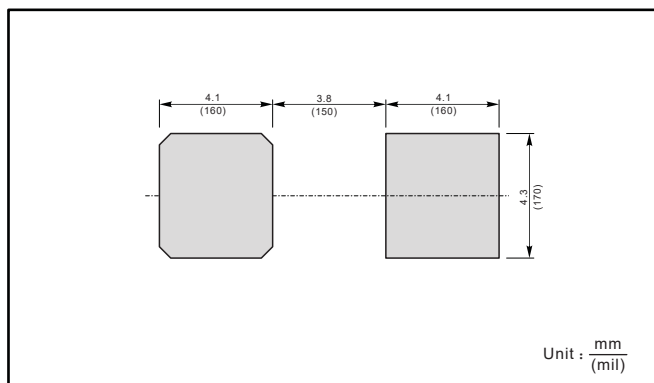
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMC



The recommended mounting pad size



Marking

Type number	Marking code
RS6DCG	RS6D
RS6GCG	RS6G
RS6JCG	RS6J
RS6MCG	RS6M