SiPower

Power Semiconductor Technology

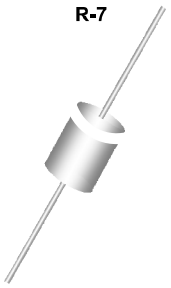
SPAL1012
Silicon Rectifier Diode

SPAL1012	Silicon Rectifier Diodes R-7 Package	Silicon Rectifier Diodes 10 Ampers 1200 Volts

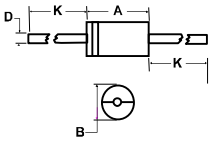
Features

- Low forward voltage drop.
- High current capability
- High surge capability
- High reliability
- Ideal for solar panel PV application such as By-Pass diode

R-7



COLOR BAND DENOTES CATHODE



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.291	0.299	7.40	7.60
B	0.311	0.319	7.90	8.10
D	0.059	0.063	1.50	1.60
K	1.000	---	25.40	---

Mechanical Data

- Cases: R-7 Axial-Leaded, Molded Plastic
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Terminals : All Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 Seconds
- Weight : 2.10 grams

Maximum Ratings and Electrical Characteristics

(Ta = 25°C unless otherwise noted)

Parameter		Symbols	SPAL1012	Units
Maximum Repetitive Reverse Voltage		V_{RRM}	1200	Volts
Maximum RMS Voltage		V_{RMS}	850	Volts
Maximum DC Blocking Voltage		V_{DC}	1200	Volts
Maximum average forward rectified current (see Fig. 1)		$I_{(AV)}$	10.0	Amps
Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave		I_{FSM}	400.0	Amps
Maximum Instantaneous Forward Voltage @ 10A (Note 1)		V_F	1.1	Volts
Leakage current-Sperrstrom	Ta = 25°C	I_R	10	uA
	Ta = 100°C		100	
Typical Thermal Resistance (Note 2)		$R_{\theta JA}$	9	°C/W
Storage Temperature Range		T_{stg}	-65 to +175	°C
Operating Junction Temperature		T_J	-50 to +175	°C

Notes: 1. Pulse test with PW=300 usec, 1% duty cycle.
2. Leads are kept at ambient temperature at a distance of 10 mm from case.

Typical Characteristics

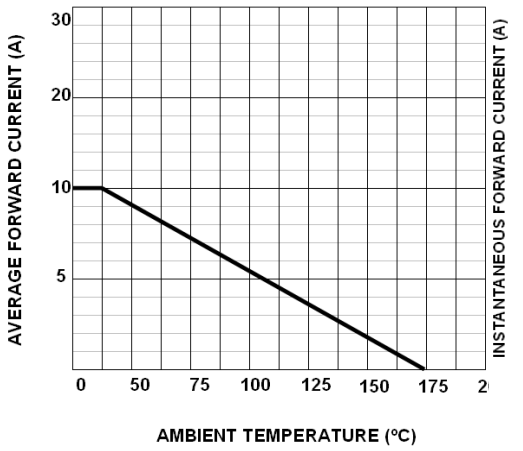


Figure 1. Forward Current Derating Curve

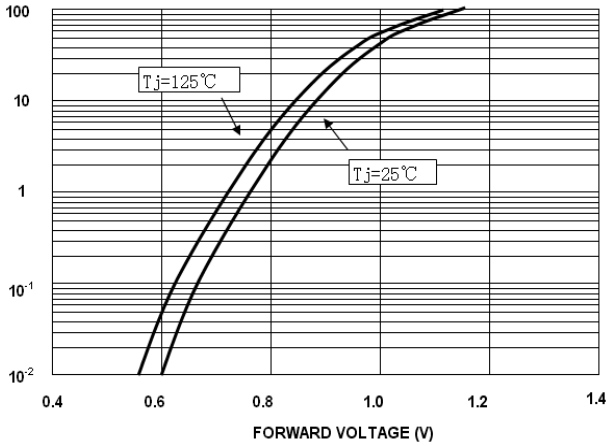


Figure 2. Forward Voltage Characteristics

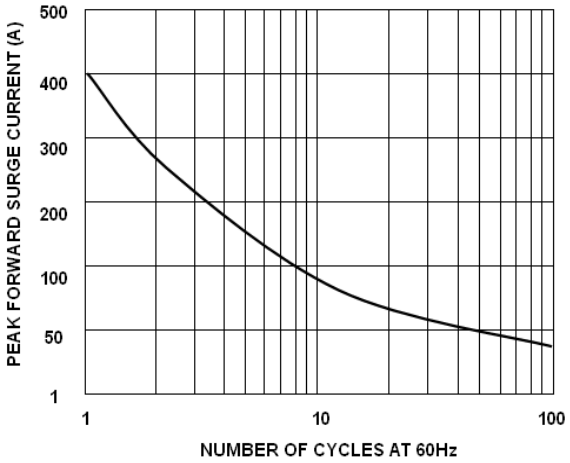


Figure 3. Non-Repetitive Surge Current

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