

Technical Data
Data Sheet N0542, Rev.-

1A1 THRU 1A7 1.0A MINIATURE SILICON RECTIFIER

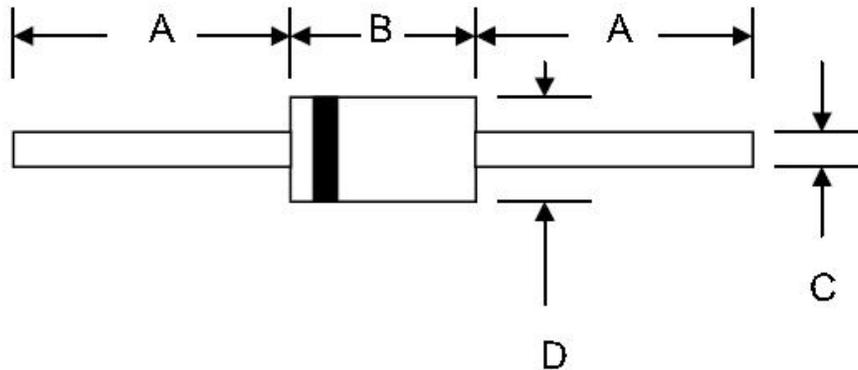
Features:

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Mechanical data:

- Case: Molded Plastic
- Terminals: Plated Leads Solderable Per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.181 grams(Approx)

Mechanical Dimensions: In mm/Inches



R-1				
Dim	Min	Max	Min	Max
A	20.0	—	0.787	—
B	2.00	3.50	0.079	0.138
C	0.53	0.64	0.021	0.025
D	2.20	2.60	0.087	0.102
	In mm		In inch	

R-1

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Marking Diagram



Where XXXXX is YYWWL

1A1 = Part Name

Cautions: Molding resin
Epoxy resin UL:94V-0

Ordering Information

Device	Package	Shipping
1A1-1A7	R-1 (Pb-Free)	5000pcs / Tape

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Type Number	Symbol	1A1	1A2	1A3	1A4	1A5	1A6	1A7	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Average forward rectified output current @ $T_A = 75^\circ\text{C}$	I_O	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							A
Forward Voltage @ $I_F = 1.0\text{A}$	V_{FM}	1.0							V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_{RM}	5.0 50							μA
Typical Junction Capacitance (Note 2)	C_J	15							pF
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	50							$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-65 to +125							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150							$^\circ\text{C}$

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case.

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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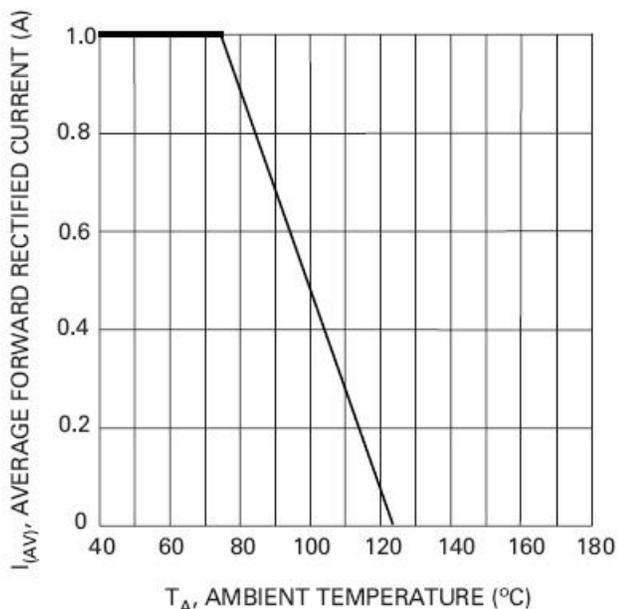


Fig. 1 Forward Current Derating Curve

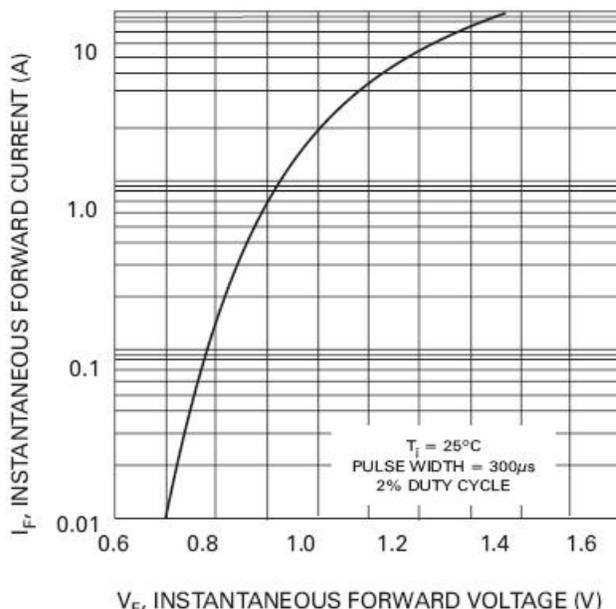


Fig. 2 Typical Forward Characteristics

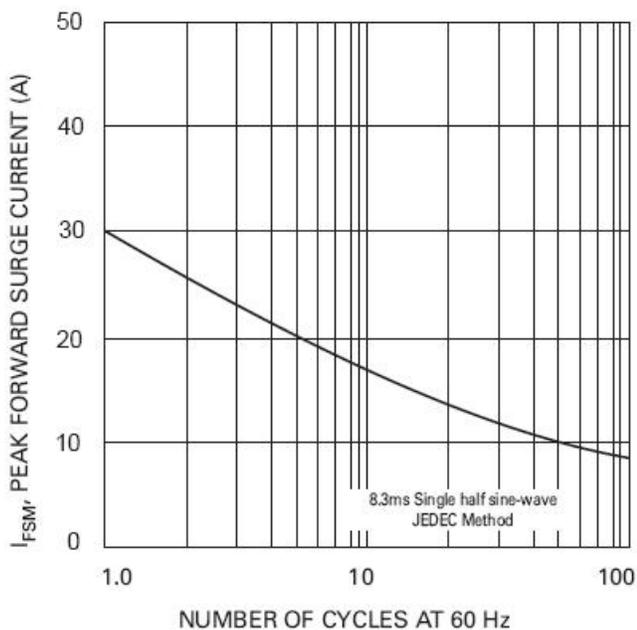


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

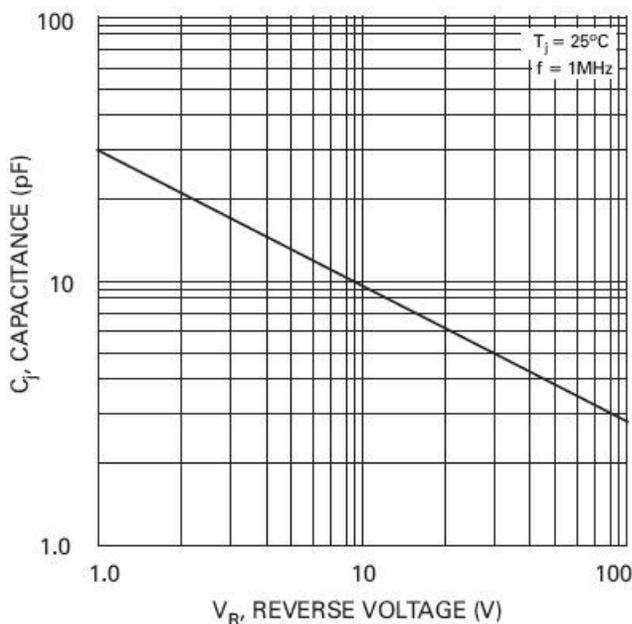


Fig. 4 Typical Junction Capacitance



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