



1N5807US/1N5809US/1N5811US

Superfast Recovery Diodes

Surface Mount (US)

POWER DISCRETES

Description

Quick reference data

V_R 50 -150 V

I_F 1N5807US to 1N5811US = 6A

t_{rr} 1N5807US to 1N5811US = 30nS

I_R 1N5807US to 1N5811US = 5 μ A

Features

- ◆ Very low reverse recovery time
- ◆ Hermetically sealed non-cavity construction
- ◆ Soft, non-snap, off recovery characteristics
- ◆ Very low forward voltage drop

These products are qualified to MIL-PRF-19500/477 and are preferred parts as listed in MIL-HDBK-5961. They can be supplied fully released as JANTX , JANTXV and JANS versions.

Electrical Specifications

Electrical specifications @ $T_A = 25^\circ\text{C}$ unless otherwise specified.

	Symbol	1N5807US	1N5809US	1N5811US	Units
Working Reverse Voltage	V_{RWM}	50	100	150	V
Repetitive Reverse Voltage	V_{RRM}	50	100	150	V
Average Forward Current (@ 75°C lead length = 0.375')	$I_{F(AV)}$	6.0			A
Repetitive Surge Current (@ 55°C in free air lead length = 0.375')	I_{FRM}	25			A
Non-Repetitive Surge Current ($t_p = 8.3\text{mS}$ @ V_r & T_{JMAX})	I_{FSM}	125			A
Storage Temperature Range	T_{STG}	-65 to +175			$^\circ\text{C}$
Average Forward Current Max (pcb mounted: $T_A = 55^\circ\text{C}$) Sine wave Square wave ($d = 0.5$)	$I_{F(AV)}$ $I_{F(AV)}$	1.7 1.8			A
I^2t for fusing ($t = 8.3\text{mS}$) max	I^2t	32			A^2S
Forward Voltage Drop max @ $T_J = 25^\circ\text{C}$	V_F	0.875 @ 4A			V
Reverse Current max @ V_{WRM} , $T_J = 25^\circ\text{C}$ @ V_{WRM} , $T_J = 100^\circ\text{C}$	I_R I_R	5.0 150			μA
Reverse Recovery Time max (1.0A I_F to 1.0A I_{RM} recover to 0.25A $I_{RM(REC)}$)	t_{rr}	30			nS
Junction Capacitance typ @ $V_R = 5\text{V}$ $f = 1\text{MHz}$	C_J	60			pF
Thermal Resistance to end cap	$R_{\theta JEC}$	6.5			$^\circ\text{C/W}$

POWER DISCRETES

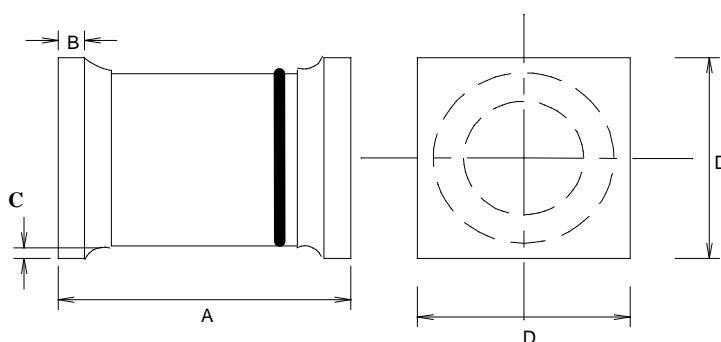
Ordering Information

Part Number	Description
1N5807US, 1N5809US, 1N5811US	Surface Mount ⁽¹⁾

Note:

(1) Available in trays and tape and reel packaging. Please consult factory for quantities.

Outline Drawing



*Cathode is denoted by a black band on a white body.

	Dimensions in Inches	
	1N5807US - 1N5811US	
	MIN	MAX
A	0.2	0.225
B	0.019	0.028
C	0.003	-
D	0.137	0.148

Contact Information

Semtech Corporation
 Power Discrettes Products Division
 200 Flynn Road, Camarillo, CA 93012
 Phone: (805)498-2111 FAX (805)498-3804