

**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 $\mu$ 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 and JANTXV 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 (@ $75^\circ\text{C}$ lead length = 0.375')	$I_{F(AV)}$	6.0			A
Repetitive Surge Current (@ $55^\circ\text{C}$ 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 = 8.3mS) max	$I^2t$	32			$\text{A}^2\text{S}$
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			$\mu\text{A}$
Reverse Recovery Time max (1.0A $I_F$ to 1.0A $I_{RM}$ recover to 0.25A $I_{RM(REC)}$ )	trr	30			nS
Junction Capacitance typ @ $V_R = 5\text{V}$ f = 1MHz	$C_J$	60			pF
Thermal Resistance to end cap	$R_{\theta JEC}$	6.5			$^\circ\text{C/W}$

## POWER DISCRETES

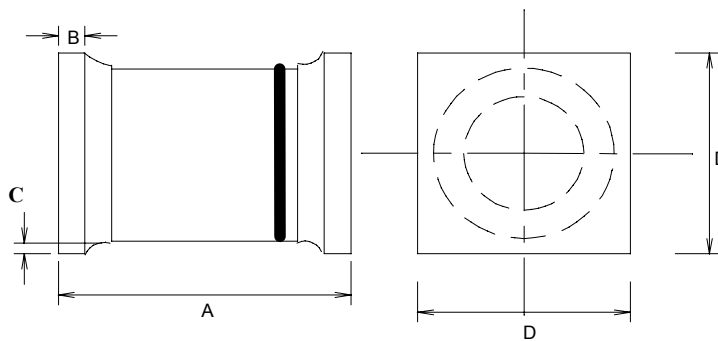
### Ordering Information

Part Number	Description
1N5807US, 1N5809US, 1N5811US	Surface Mount <sup>(1)</sup>

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