

TECHNICAL DATA  
DATA SHEET 6122, REV -

## ULTRA FAST RECOVERY SILICON RECTIFIER DIE

### FEATURES / BENEFITS:

- ✓ Die fabricated on a MIL-PRF-19500 JANKC qualified manufacturing line
- ✓ Class H and class K element evaluation per MIL-PRF-19500/477
- ✓ All ratings are @  $T_A = 25\text{ }^\circ\text{C}$  unless otherwise specified

### ELECTRICAL CHARACTERISTICS:

#### Maximum Ratings:

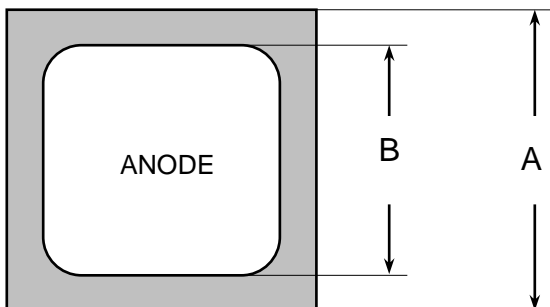
Characteristics	Symbol	Condition	Min.	Max.	Units
Peak Inverse Voltage DC Blocking Voltage 1N5807 1N5809 1N5811	$V_{RWM}$	-		50 100 150	V
Breakdown Voltage 1N5807 1N5809 1N5811	$V_{BR1}$	$I_{BR}=100\mu\text{A}$	60 110 160		V
Max. Average Forward Current	$I_{F(AV)}$	$T_A = 55^\circ\text{C}$		3.0	A
Max. Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	$T_p = 8.3\text{ ms}$		125	A
Max. Junction Temperature	$T_J$	-	-65	+175	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-65	+175	$^\circ\text{C}$

#### Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	$V_{FM3}$	$I_{FM}=3.0\text{A}, T_J = 25\text{ }^\circ\text{C}$	0.865	V
	$V_{FM4}$	$I_{FM}=4.0\text{A}, T_J = 25\text{ }^\circ\text{C}$	0.875	V
	$V_{FM5}$	$I_{FM}=6.0\text{A}, T_J = 25\text{ }^\circ\text{C}$	0.925	
	$V_{FM7}$	$I_{FM}=4.0\text{A}, T_J = 125\text{ }^\circ\text{C}$	0.800	V
	$V_{FM8}$	$I_{FM}=4.0\text{A}, T_J = -65\text{ }^\circ\text{C}$	1.075	V
Max. Reverse Current	$I_{R1}$	$V_R = V_{RWM}, \text{pulse}, T_J = 25\text{ }^\circ\text{C}$	5.0	$\mu\text{A}$
	$I_{R2}$	$V_R = V_{RWM}, \text{pulse}, T_J = 125\text{ }^\circ\text{C}$	525	$\mu\text{A}$
Breakdown Voltage 1N5807 1N5809 1N5811	$V_{BR2}$	$I_{BR}=100\mu\text{A}, T_J = -65\text{ }^\circ\text{C}$	50 100 150	V
Reverse Recovery Time	$t_{rr}$	$I_F = I_R = 1.0\text{A}, I_{RM} = 0.1\text{A}$	30	ns
Max. Junction Capacitance	$C_T$	$V_R = 10\text{V}, T_C = 25\text{ }^\circ\text{C}$ $f = 1\text{MHz}$ $V_{SIG} = 50\text{mV (p-p)}$	60	pF

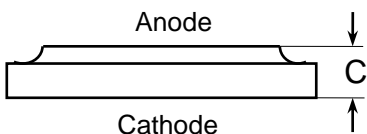
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**PACKAGE DIMENSIONS (inches/mm):**



Top anode and bottom cathode

Top Metal Ti (0.3 kA) / Al (45 kA) nominal  
Bottom Metal Ti (1.2 kA) / Ni (1.8 kA) / Ag (3.0 kA) nominal



Ltr	Dimensions 1N5807, 1N5809, 1N5811			
	Inches		Millimeters	
	Min	Max	Min	Max
A	.062	.068	1.57	1.73
B	.046	.052	1.17	1.32
C	.008	.012	0.20	0.30

**PART ORDERING INFORMATION:**

**JAN<sub>x</sub>CH1NXXXX**



Suffix	Part Number	Description
H	JANHCH1N5807	Class H Level
K	JANKCH1N5807	Class K Level

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