

TECHNICAL DATA  
DATA SHEET 5498, REV A

## 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:

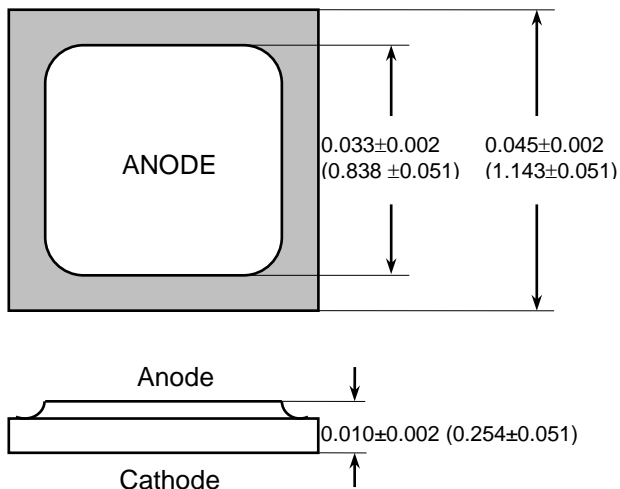
Characteristics	Symbol	Condition	Min.	Max.	Units
Peak Inverse Voltage DC Blocking Voltage 1N5802 1N5804 1N5806	$V_{RWM}$	-		50 100 150	V
Breakdown Voltage 1N5802 1N5804 1N5806	$V_{BR1}$	$I_{BR}=100\mu\text{A}$	60 110 160		V
Max. Average Forward Current	$I_{F(AV)}$	$T_A= 55^\circ\text{C}$		1.0	A
Max. Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	$T_p= 8.3\text{ ms}$		35	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	$V_{F1}$	1A, pulse, $T_J = 25\text{ }^\circ\text{C}$	0.875	V
	$V_{F2}$	2.5A, pulse, $T_J = 25\text{ }^\circ\text{C}$	0.975	V
	$V_{F3}$	1A, pulse, $T_J = 125\text{ }^\circ\text{C}$	0.800	V
	$V_{F4}$	1A, pulse, $T_J = -65\text{ }^\circ\text{C}$	1.075	V
Max. Reverse Current	$I_{R1}$	$V_R = V_{RWM}$ , pulse, $T_J = 25\text{ }^\circ\text{C}$	1.0	$\mu\text{A}$
	$I_{R2}$	$V_R = V_{RWM}$ , pulse, $T_J = 125\text{ }^\circ\text{C}$	175	$\mu\text{A}$
Breakdown Voltage 1N5802 1N5804 1N5806	$V_{BR2}$	$I_{BR}=100\mu\text{A}$ , $T_J = -65\text{ }^\circ\text{C}$	50 100 150	V
Reverse Recovery Time	$t_{rr}$	$I_F = I_R = 0.5\text{A}$ , $I_{RM} = 0.05\text{A}$	25	ns
Max. Junction Capacitance	$C_T$	$V_R = 10\text{V}$ , $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$ , $V_{SIG} = 50\text{mV}$ (p-p)	25	pF

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



**JANHCF/ JANKCF Series**

Top anode and bottom cathode

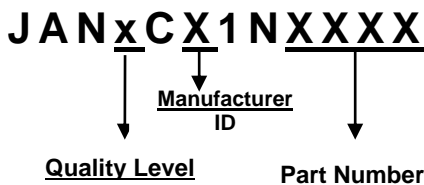
Top Metal Ti (0.3 kA) / Al (45 kA) nominal  
Bottom Metal Ti (1.2 kA) / Ni (1.8 kA) / Au (4.0 kA) nominal

**JANHCH/ JANKCH Series**

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

**PART ORDERING INFORMATION:**



Suffix	Part Number	Description
H	JANHCF1N5806	Class H Level
K	JANKCF1N5806	Class K Level

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