SENSITRON SEMICONDUCTOR

TECHNICAL DATA
DATA SHEET 6003, REV B.1

SMALL SIGNAL / COMPUTER DIODE CHIP

FEATURES / BENEFITS:

- ✓ Die fabricated on a MIL-PRF-19500 JANKC qualified manufacturing line
- ✓ Class H and class K element evaluation per MIL-PRF-19500/116
- ✓ All ratings are @ T_A = 25 °C unless otherwise specified

ELECTRICAL CHARACTERISTICS:

MAXIMUM RATINGS

ALL RATINGS ARE AT T_A = 25 °C UNLESS OTHERWISE SPECIFIED

RATING	SYMBOL	MAX.	UNITS
PEAK INVERSE VOLTAGE (I_R = 100 μA)	PIV	100	Volts
WORKING PEAK REVERSE VOLTAGE	V_{RWM}	75	Volts
MAXIMUM AVERAGE DC OUTPUT CURRENT	I_O	0.2	Amps
PEAK SINGLE CYCLE SURGE CURRENT (t_p = 8.3 ms, half sine wave)	I_{FSM}	2.0	Amps
MAXIMUM OPERATING AND STORAGE TEMPERATURE RANGE	$T_{op, stg}$	-65 to +175	°C

ELECTRICAL CHARACTERISTICS

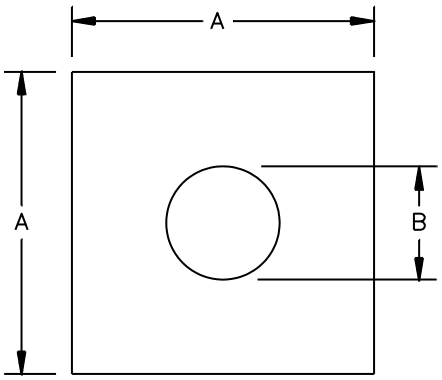
CHARACTERISTIC		SYMBOL	MAX.	UNITS
MAXIMUM FORWARD VOLTAGE DROP	(I_F = 10 mA; pulsed)	V_{F1}	0.8	Volts
	(I_F = 100 mA; pulsed) 1N4148	V_{F2}	1.2	Volts
	(I_F = 50 mA; pulsed) 1N914		1.2	Volts
	(T_A=150 °C, I_F = 10 mA; pulsed)	V_{F3}	0.8	Volts
	(T_A=-55°C, I_F = 100 mA; pulsed) 1N4148	V_{F4}	1.3	Volts
	(T_A=-55°C, I_F = 50 mA; pulsed) 1N914		1.3	Volts
REVERSE CURRENT	(V_R = 20 V)	I_{R1}	25	nA dc
	(V_R = V_{RWM})	I_{R2}	0.5	μA dc
	(T_A=150 °C,V_R = 20V)	I_{R3}	35	μA dc
	(T_A=150 °C,V_R = V_{RWM})	I_{R4}	75	μA dc
CAPACITANCE	(V_R = 0 Vdc; V_{sig}=50 $mV_{(p-p)}$ f = 1 MHz)	C_1	4.0	pF
	(V_R = 1.5 Vdc; V_{sig}=50 $mV_{(p-p)}$ f = 1 MHz)	C_2	2.8	pF
MAXIMUM REVERSE RECOVERY TIME	(I_F = I_R = 10 mA, I_{RR} = 1mA)	t_{rr}	5.0	ns

SENSITRON SEMICONDUCTOR

SMALL SIGNAL/COMPUTER DIODE CHIP

TECHNICAL DATA
DATA SHEET 6003, REV B.1

PACKAGE DIMENSIONS (inches/mm):



BACKSIDE IS CATHODE

Ltr	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
A	.017	.021	0.432	0.533
B	.008	.010	0.203	0.254
C	.007	.011	0.178	0.279

NOTES:
1. Dimensions are in inches. Millimeters are given for general information only.
2. Element evaluation accomplished utilizing TO-39 package.
3. The physical characteristics of the die are:

Metallization:
Top (anode): Al
Back (cathode): Au
Al thickness: 45,000 Å nominal
Gold thickness:
JANHCC and **JANKCC:** Ti/Ni/Au (1,200Å/1,800Å/4,000Å) nominal
JANHCD and **JANKCD:** Ti/Au (200Å/4,350Å) nominal

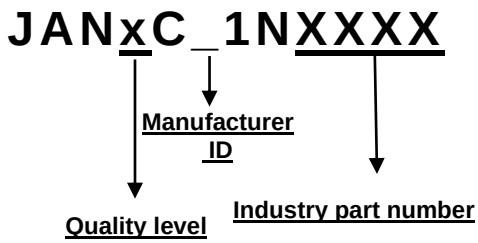
JANHCC1N4148, JANKCC1N4148
JANHCD1N4148, JANKCD1N4148
JANHCC1N914, JANKCC1N914
JANHCD1N914, JANKCD1N914

SMALL SIGNAL/COMPUTER DIODE CHIP

SENSITRON SEMICONDUCTOR

TECHNICAL DATA
DATA SHEET 6003, REV B.1

PART ORDERING INFORMATION:



Quality Level:

Suffix	Part Number	Description
H	*JANHCC1N4148*	*Class H level*
K	*JANKCC1N4148*	*Class K level*

DISCLAIMER:
1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).
2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment , and safety equipment) , safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement .
3- In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
4- In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
5- No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.
6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of Sensitron Semiconductor.
7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.