

JANHCD1N6638, JANHCD1N6642, JANHCD1N6643
 JANKCD1N6638, JANKCD1N6642, JANKCD1N6643
 JANHCE1N6638, JANHCE1N6642, JANHCE1N6643
 JANKCE1N6638, JANKCE1N6642, JANKCE1N6643

SMALL SIGNAL/COMPUTER DIODE CHIP

SENSITRON
SEMICONDUCTOR

TECHNICAL DATA
 DATA SHEET 5496, REV A

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-19500/578
- ✓ All ratings are @ $T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified

ELECTRICAL CHARACTERISTICS:

MAXIMUM RATINGS

ALL RATINGS ARE AT $T_A = 25\text{ }^\circ\text{C}$ UNLESS OTHERWISE SPECIFIED

RATING		SYMBOL	MAX.	UNITS
PEAK INVERSE VOLTAGE	($I_R = 100\text{ }\mu\text{A}$)	PIV		Volts
	1N6638		150	
	1N6642		100	
	1N6643		75	
WORKING PEAK REVERSE VOLTAGE		V_{RWM}		Volts
	1N6638		125	
	1N6642		75	
	1N6643		50	
MAXIMUM AVERAGE DC OUTPUT CURRENT		I_o	0.3	Amps
PEAK SINGLE CYCLE SURGE CURRENT	($t_p = 8.3\text{ ms}$, half sine wave)	I_{FSM}	2.5	Amps
MAXIMUM OPERATING AND STORAGE TEMPERATURE RANGE		$T_{op, stg}$	-65 to +175	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

CHARACTERISTIC		SYMBOL	MAX.	UNITS
MAXIMUM FORWARD VOLTAGE DROP	($I_F = 10\text{ mA}$; pulsed)	V_{F1}		Volts
	All parts		0.8	
	($I_F = 200\text{ mA}$; pulsed)	V_{F2}		
	1N6638		1.1	
	($I_F = 100\text{ mA}$; pulsed)			
	1N6642, 1N6643		1.2	
	($I_F = 10\text{ mA}$; pulsed at $T_A = 150\text{ }^\circ\text{C}$)	V_{F3}		
	1N6638		.65	
	1N6642, 1N6643		.80	
REVERSE CURRENT	($V_R = 20\text{ Vdc}$)	I_{R1}		nA dc
	1N6638		35	
	1N6642		25	
	1N6643		50	
	($V_R = V_{RWM}$)	I_{R2}	500	nA dc
	($T_A = 150\text{ }^\circ\text{C}$, $V_R = 20\text{ Vdc}$)	I_{R3}		$\mu\text{A dc}$
	1N6638, 1N6642		50	
	1N6643		75	

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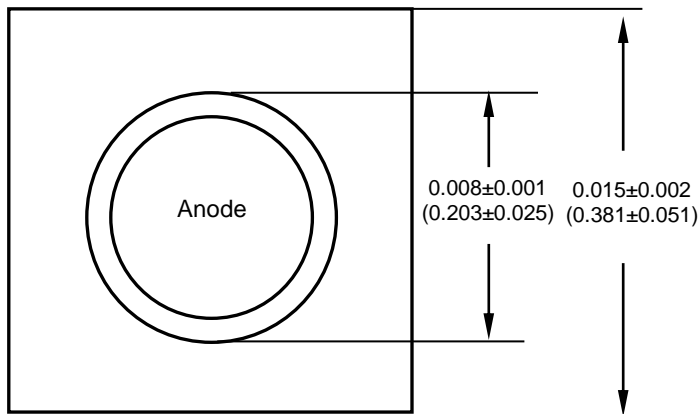
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	($T_A=150^\circ\text{C}$, $V_R = V_{RWM}$)	I_{R4}	100	$\mu\text{A dc}$
CAPACITANCE	($V_R = 0 \text{ Vdc}$; $V_{\text{sig}}=50 \text{ mV}_{(p-p)}$ $f = 1 \text{ MHz}$ 1N6638 1N6642, 1N6643	C_{T1}	2.5 5.0	pF
	($V_R = 1.5 \text{ Vdc}$; $V_{\text{sig}}=50 \text{ mV}_{(p-p)}$ $f = 1 \text{ MHz}$ 1N6638 1N6642, 1N6643	C_{T2}	2.0 2.8	
MAXIMUM REVERSE RECOVERY TIME	($I_F = I_R = 10 \text{ mA}$) 1N6638 1N6642 1N6643	t_{rr}	4.5 5.0 6.0	nsec
MAXIMUM FORWARD RECOVERY TIME	($I_F = 200\text{mA}$)	t_{fr}	20	ns

PACKAGE DIMENSIONS (inches/mm):



Top anode and bottom cathode

Al top/Au bottom

Top Metal: Al (45,000 A nominal)

Bottom Metal:

JANHCD and **JANKCD**: Ti/Ni/Au (1,200Å/1,800Å/4,000Å) nominal

JANHCE and **JANKCE**: Ti/Au (200Å/4,350Å) nominal



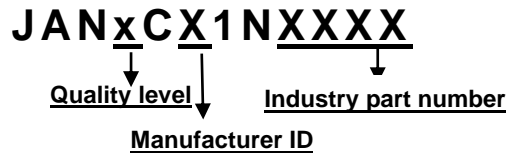
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PART ORDERING INFORMATION:



Quality Level:

Suffix	Part Number	Description
H	JANHCD1N6642	Class H level
K	JANKCD1N6642	Class K level

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