SENSITRON SEMICONDUCTOR

TECHNICAL DATA
DATA SHEET 5086, REV. A.2

AVAILABLE AS
1N, JAN, JANTX, JANTXV
JANS
JAN EQUIVALENT*
SJ*, SX*, SV*, SS*

V_F Controlled Diodes

Qualified per MIL-PRF-19500/241

DESCRIPTION:

This voidless hermetically sealed Vf controlled diode is military qualified per MIL-PRF-19500/241 and is targeted for space, commercial and military aircraft, military vehicles, shipboard markets and all high reliability applications.

FEATURES / BENEFITS:

- ✓ Hermetic, non-cavity glass package
- ✓ Category I Metallurgically bonded
- ✓ All devices are 100% hot solder dipped
- ✓ JAN/ JANTX/ JANTXV available per MIL-PRF-19500/241

MAXIMUM RATINGS:

- ✓ Operating and Storage Temperature: -65°C to +175°C
- ✓ Forward Voltage (max): 1Vdc @ 200mA, .92Vdc @ 100mA
- ✓ Reverse Leakage Current (max): 1 nAdc @ V_R

ELECTRICAL CHARACTERISTICS:

All ratings are at T_A = 25°C unless otherwise specified.

RATING	CONDITIONS	MIN	TYP	MAX	UNIT
Working Peak Reverse Voltage (V_{RWM})		125	-	-	V (pk)
Average Rectified Output Current (I_o)	T_A = 75°C	-	-	150	mA dc
Surge Peak Forward Current (I_{FSM}) @ T_A=25°C	t_p = 1s	-	-	500	mA (pk)
Thermal Resistance ($R_{\theta JL}$)	L=.375 in	-	-	250	°C/W
Thermal Resistance ($R_{\theta JC}$)	L=0	-	-	40	°C/W
Thermal Resistance ($R_{\theta JX}$)				245	°C/W
Junction Temperature (T_J)	-	-65	-	+175	°C
Storage Temp. (T_{stg})	-	-65	-	+175	°C

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1N3595-1, 1N3595US

VF CONTROLLED DIODE

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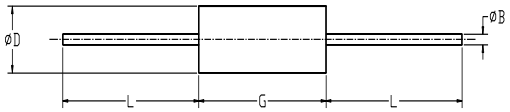
CHARACTERISTIC	CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage	V_{F1} at I_{F1} = 200 mA dc V_{F2} at I_{F2} = 100 mA dc V_{F3} at I_{F3} = 50 mA dc V_{F4} at I_{F4} = 10 mA dc V_{F5} at I_{F5} = 5 mA dc V_{F6} at I_{F6} = 1 mA dc	0.83 0.79 0.74 0.65 0.60 0.52	-	1.0 0.92 0.88 0.80 0.765 0.70	V
Maximum Reverse Leakage Current	I_{RM1} @ V_{RWM} I_{RM2} @ V_{RWM}, T_A = 150 °C	-	-	1 3	nA dc µA
Breakdown Voltage (BV_R)	I_R = 100µA, T_A = -55 °C	150	-	-	V
Junction Capacitance (C_J)	V_R = 0Vdc, f = 1MHz	-	-	8.0	pF

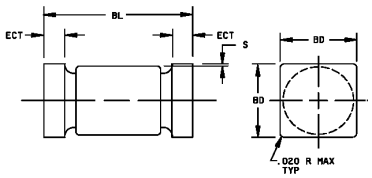
Sensitron **space equivalent diodes are manufactured and screened to MIL-PRF-19500 flow and guidelines starting from wafer fabrication through assembly and testing using our internal specification.*

PACKAGE DIMENSIONS (inches/mm)

AXIAL



MELF (Add "US")



1N3595-1

PACKAGE STYLE	DIMENSIONS - INCHES (MILLIMETERS) ϕB	ϕD	G	L
DO-35	.018/.022 0.46/0.56	.056/.075 1.42/1.91	.140/.180 3.56/4.57	1.00/1.5 25.4/38.10

1N3595US

PACKAGE STYLE	DIMENSIONS - INCHES (MILLIMETERS) BL	BD	S	ECT
D-5D	.165/.195 4.19/4.95	.070/.085 1.78/2.16	0.003 Min	.019/.028 0.48/0.71

PART ORDERING INFORMATION:

The following part numbers can be purchased in either axial or surface mount devices and screened and tested to the military screening flow. The parts are marked in accordance with the testing performed, example:

Sensitron Screening Level	*Part Number-- Leaded Package (example for 1N3595-1)	*Part Number-- Surface Mount Package (example for 1N3595US)
1N	1N3595-1	1N3595US
JAN	JAN1N3595-1	JAN1N3595US
SJ	SJ3595-1	SJ3595US
JANTX	JANTX1N3595-1	JANTX1N3595US
SX	SX3595-1	SX3595US
JANTXV	JANTXV1N3595-1	JANTXV1N3595US
SV	SV3595-1	SV3595US
JANS	JANS1N3595-1	JANS1N3595US
SS	SS3595-1	SS3595US

**Parts can also be ordered Tape & Reel*

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