

## 1500W Unipolar TVS Diode in DO-13 Package

*Qualified per MIL-PRF-19500/500*

### DESCRIPTION:

This DO-13 hermetically sealed unipolar TVS diode series is military qualified per MIL-PRF-19500/500 and is targeted for space, commercial and military aircraft, military vehicles, shipboard markets and all high reliability applications.

### FEATURES / BENEFITS:

- ✓ Hermetic sealed DO-13 package
- ✓ Parts are hot solder dipped
- ✓ JAN/ JANTX/ JANTXV available per MIL-PRF-19500/500

### MAXIMUM RATINGS

- ✓ Operating & Storage Temperature: -65°C to +175°C
- ✓ Junction Temperature: -65°C to +175°C

### ELECTRICAL CHARACTERISTICS

SERIES TYPE	MIN BREAKDOWN VOLTAGE $V_{(BR)}$ @ $I_{(BR)}$		WORKING PEAK REVERSE VOLTAGE VRWM	MAXIMUM STANDBY CURRENT $I_D$	MAX. CLAMP. VOLTAGE VC @ $I_{PP}$ $t_p = 1ms$	MAX. PEAK PULSE CURRENT $I_{PP}$ $t_p = 1ms, t_r = 10\mu s$	MAX. TEMP. COEFFICIENT $V_{(BR)}$
	Vdc	mA dc					
<b>1500W</b>	Vdc	mA dc	Vdc	$\mu$ Adc	V(pk)	A(pk)	% / °C
1N5907	6.00	1	5.00	300	10.0	150.0	.057
1N5629A	6.45	10	5.80	1000	10.5	143.0	.057
1N5630A	7.13	10	6.40	500	11.3	132.0	.061
1N5631A	7.79	10	7.02	200	12.1	124.0	.065
1N5632A	8.65	1	7.78	50	13.4	112.0	.068
1N5633A	9.50	1	8.55	10	14.5	103.0	.073
1N5634A	10.50	1	9.40	5	15.6	96.0	.075
1N5635A	11.40	1	10.20	5	16.7	90.0	.078
1N5636A	12.40	1	11.10	5	18.2	82.0	.081
1N5635A	11.40	1	10.20	5	16.7	90.0	.078
1N5636A	12.40	1	11.10	5	18.2	82.0	.081
1N5637A	14.30	1	12.80	5	21.2	71.0	.084
1N5638A	15.20	1	13.60	5	22.5	67.0	.086
1N5639A	17.10	1	15.30	5	25.2	59.5	.088
1N5640A	19.00	1	17.10	5	27.7	54.0	.090
1N5641A	20.90	1	18.80	5	30.6	49.0	.092
1N5642A	22.80	1	20.50	5	33.2	45.0	.094
1N5643A	25.70	1	23.10	5	37.5	40.0	.096
1N5644A	28.50	1	25.60	5	41.4	36.0	.097
1N5645A	31.40	1	28.20	5	45.7	33.0	.098
1N5555	33.00	1	30.50	5	47.5	32.0	.093
1N5646A	34.20	1	30.80	5	49.9	30.0	.099
1N5647A	37.10	1	33.30	5	53.9	28.0	.100
1N5648A	40.90	1	36.80	5	59.3	25.3	.101

# **SENSITRON** **SEMICONDUCTOR**

**1N5555 thru 1N5558, 1N5907,  
1N5629A thru 1N5665A**

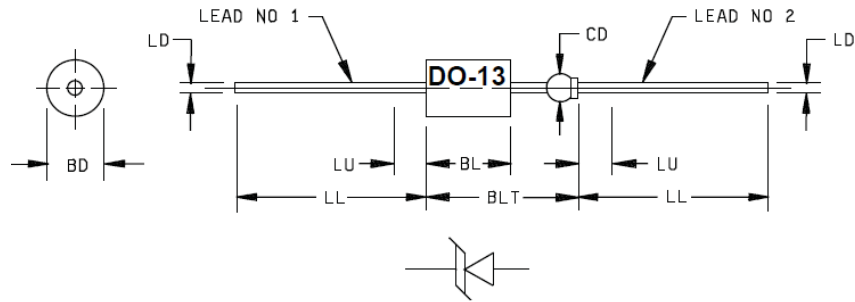
**1500W Transient Voltage  
Suppressor Diodes**

**TECHNICAL DATA  
DATA SHEET 5501, REV. A.3**

SERIES TYPE	MIN BREAKDOWN VOLTAGE $V_{(BR)} @ I_{(BR)}$		WORKING PEAK REVERSE VOLTAGE VRWM	MAXIMUM STANDBY CURRENT $I_D$	MAX. CLAMP. VOLTAGE VC @ $I_{PP}$ tp = 1ms	MAX. PEAK PULSE CURRENT tp = 1ms, tr = 10µs $I_{PP}$	MAX. TEMP. COEFFICIENT $V_{(BR)}$
	Vdc	mA dc					
1500W	Vdc	mA dc	Vdc	µAdc	V(pk)	A(pk)	% / °C
1N5556	43.70	1	40.30	5	63.5	24.0	.094
1N5649A	44.70	1	40.20	5	64.8	23.2	.101
1N5650A	48.50	1	43.60	5	70.1	21.4	.102
1N5651A	53.20	1	47.80	5	77.0	19.5	.103
1N5557	54.00	1	49.00	5	78.5	19.0	.096
1N5652A	58.90	1	53.00	5	85.0	17.7	.104
1N5653A	64.60	1	58.10	5	92.0	16.3	.104
1N5654A	71.30	1	64.10	5	103.0	14.6	.105
1N5655A	77.90	1	70.10	5	113.0	13.3	.105
1N5656A	86.50	1	77.80	5	125.0	12.0	.106
1N5657A	95.00	1	85.50	5	137.0	11.0	.106
1N5658A	105.00	1	94.00	5	152.0	9.9	.107
1N5659A	114.00	1	102.00	5	165.0	9.1	.107
1N5660A	124.00	1	111.00	5	179.0	8.4	.107
1N5661A	143.00	1	128.00	5	207.0	7.2	.108
1N5662A	152.00	1	136.00	5	219.0	6.8	.108
1N5558	161.00	1	175.00	5	265.0	5.7	.100
1N5663A	162.00	1	145.00	5	234.0	6.4	.108
1N5664A	171.00	1	154.00	5	246.0	6.1	.108
1N5665A	190.00	1	171.00	5	274.0	5.5	.108

**TECHNICAL DATA  
DATA SHEET 5501, REV. A.3**

**PACKAGE DIMENSIONS (inches/mm)**



Symbol	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
BD	.215	.235	5.46	5.97	
BL	.293	.357	7.44	9.07	3
BLT		.570		14.48	
CD	.045	.100	1.14	2.54	5
LD	.025	.035	0.64	0.89	
LL	1.000	1.625	25.40	41.28	4
LU		.188		4.78	4

**PKG: DO-13**

**NOTES:**

1. Dimensions are in inches.
2. Millimeters are given for general information only.
3. The major diameter is essentially constant along its length.
4. Within this zone, diameter may vary to allow for lead finishes and irregularities.
5. Dimension to allow for pinch or seal deformation anywhere along tubulation.
6. Lead 1 (cathode) shall be electrically connected to the case.
7. In accordance with ASME Y14.5M, diameters are equivalent to  $\Phi$ x symbology.

**PART ORDERING INFORMATION**

*The following part numbers can be 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 <i>(example for 1N5555)</i>
<b>1N</b>	1N5555
<b>JAN</b>	JAN1N5555
<b>JANTX</b>	JANTX1N5555
<b>JANTXV</b>	JANTXV1N5555

# **SENSITRON** **SEMICONDUCTOR**

1N5555 thru 1N5558, 1N5907,  
1N5629A thru 1N5665A

**1500W Transient Voltage  
Suppressor Diodes**

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## **TECHNICAL DATA DATA SHEET 5501, REV. A.3**

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