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NTE ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089

NTE4903 thru NTE4999
Zener Transient Overvoltage Suppressor
Bidirectional

Description:

The NTE4900 series of silicon Transient Suppressors designed to protect voltage sensitive components from high energy voltage transients. Transient over voltage suppressor devices have become very important as a consequence of their high surge capability, extremely fast response time, and low incremental surge resistance (Rs).

Application:

The NTE4900 series has a peak pulse power rating of 1500 watts for one millisecond. Can protect integrated circuits, hybrids, CMOS, MOS, and other voltage sensitive components in a broad range of applications such as telecommunications, power supplies, computers, automotive, industrial and medical equipment.

Absolute Maximum Ratings;

Peak Pulse Power Dissipation (T_A = +25°C) 1500W

$t_{clamping}$ (0 volts to Bv Min) . . . . . < 5 x 10–9 sec

Operating and Storage Temperature . . . . . –65°C to +175°C

Forward Surge Rating 200 Amps, ... 1/20 Second at +25°C

Steady State Power Dissipation . . . . . 5.0 W @ T1 = +25°C

Electrical Characteristics:

Clamping Factor: 1.33 @ full rated power
1.20 @ 50% rated power

The clamping factor is defined as: The ratio of the actual V_C (Clamping Voltage) to the actual BV (Breakdown Voltage) as measured on a specific device.

NTE Type Number	Diagram Number	Maximum Reverse Stand Off Voltage (Volts)	Breakdown Voltage @ I_T (Volts)				Maximum Ratings			Temperature Coefficient of BV%/°C
							Clamping Voltage @ I_{pp} (1msec) (Volts)	Reverse Leakage Current @ V_R (μA)	Peak Pulse Current (Amps)	
		V_R	V_{BR}				V_C	I_R	I_{pp}	
			Min	Typ	Max	I_T mA				
4903	183	5.50	6.12	6.80	7.48	10.0	10.8	1000.0	139.00	0.057
4905	183	6.40	7.13	7.50	7.88	10.0	11.3	500.0	132.00	0.061
4907	183	7.02	7.79	8.20	8.61	10.0	12.1	200.0	124.00	0.065
4911	183	8.55	9.50	10.00	10.50	10.0	14.5	10.0	103.00	0.073
4915	183	10.20	11.40	12.00	12.60	1.0	16.7	5.0	90.00	0.078

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Electrical Characteristics (Cont'd):

Clamping Factor: 1.33 @ full rated power
1.20 @ 50% rated power

The clamping factor is defined as: The ratio of the actual V_C (Clamping Voltage) to the actual BV (Breakdown Voltage) as measured on a specific device.

NTE Type Number	Diagram Number	Maximum Reverse Stand Off Voltage (Volts)	Breakdown Voltage @ I_T (Volts)				Maximum Ratings			Temperature Coefficient of BV%/°C
							Clamping Voltage @ I_{pp} (1msec) (Volts)	Reverse Leakage Current @ V_R (μA)	Peak Pulse Current (Amps)	
		V_R	V_{BR}				V_C	I_R	I_{pp}	
			Min	Typ	Max	I_T mA				
4919	183	11.10	12.40	13.00	13.70	1.0	18.2	5.0	82.00	0.081
4921	183	12.80	14.30	15.00	15.80	1.0	21.1	5.0	71.00	0.084
4923	183	13.60	15.20	16.00	16.80	1.0	22.5	5.0	67.00	0.086
4927	183	15.30	17.10	18.00	18.90	1.0	25.2	5.0	59.50	0.088
4929	183	17.10	19.00	20.00	21.00	1.0	27.7	5.0	54.00	0.090
4933	183	20.50	22.80	24.00	25.20	1.0	33.2	5.0	45.00	0.094
4935	183	23.10	25.70	27.05	28.40	1.0	37.5	5.0	40.00	0.096
4937	183	25.60	28.50	30.00	31.50	1.0	36.0	5.0	41.40	0.097
4939	183	28.20	31.40	33.00	34.70	1.0	45.7	5.0	33.00	0.098
4941	183	30.80	34.20	36.00	37.80	1.0	49.9	5.0	30.00	0.099
4943	183	33.30	37.10	39.00	41.00	1.0	53.9	5.0	28.00	0.100
4945	183	36.80	40.90	43.00	45.20	1.0	59.3	5.0	25.30	0.101
4947	183	40.20	44.70	47.00	49.40	1.0	64.8	5.0	23.30	0.101
4951	183	43.60	48.50	51.05	53.60	1.0	70.1	5.0	21.40	0.102
4953	183	47.80	53.20	56.00	58.80	1.0	77.0	5.0	19.50	0.103
4955	183	53.00	58.90	62.00	65.10	1.0	85.0	5.0	17.70	0.104
4959	183	58.10	64.60	68.00	71.40	1.0	92.0	5.0	16.30	0.104
4961	183	64.10	71.30	75.00	78.80	1.0	103.0	5.0	14.60	0.105
4963	183	70.10	77.90	82.00	86.10	1.0	113.0	5.0	13.30	0.105
4965	183	77.80	86.50	91.00	95.50	1.0	125.0	5.0	12.00	0.106
4967	183	85.50	95.00	100.00	105.00	1.0	137.0	5.0	11.00	0.106
4969	183	94.00	105.00	110.00	116.00	1.0	152.0	5.0	9.90	0.107
4971	183	102.00	114.00	120.00	126.00	1.0	165.0	5.0	9.10	0.107
4973	183	111.00	124.00	130.00	137.00	1.0	179.0	5.0	8.40	0.107
4975	183	128.00	143.00	150.00	158.00	1.0	207.0	5.0	7.20	0.108
4977	183	136.00	152.00	160.00	168.00	1.0	219.0	5.0	6.80	0.108
4979	183	145.00	162.00	170.00	179.00	1.0	234.0	5.0	6.40	0.108
4981	183	154.00	171.00	180.00	189.00	1.0	246.0	5.0	6.10	0.108
4983	183	185.00	209.00	220.00	231.00	1.0	328.0	5.0	4.60	0.109
4985	183	214.00	237.00	250.00	263.00	1.0	344.0	5.0	5.00	0.109
4989	183	171.00	190.00	200.00	210.00	1.0	274.0	5.0	5.50	0.108
4991	183	256.00	285.00	300.00	315.00	1.0	414.0	5.0	3.58	0.110
4993	183	273.00	304.00	320.00	336.00	1.0	438.0	5.0	4.50	0.110
4995	183	300.00	333.00	350.00	368.00	1.0	482.0	4.0	3.08	0.110
4997	183	342.00	380.00	400.00	420.00	1.0	548.0	4.0	2.78	0.110
4999	183	376.00	418.00	440.00	462.00	1.0	603.0	5.0	3.50	0.110

Note 1. Normal selection of a zener transient over voltage suppressor is by rated stand–off voltage (V_{WM}) and should be equal or greater than DC or continuous peak operating voltage.

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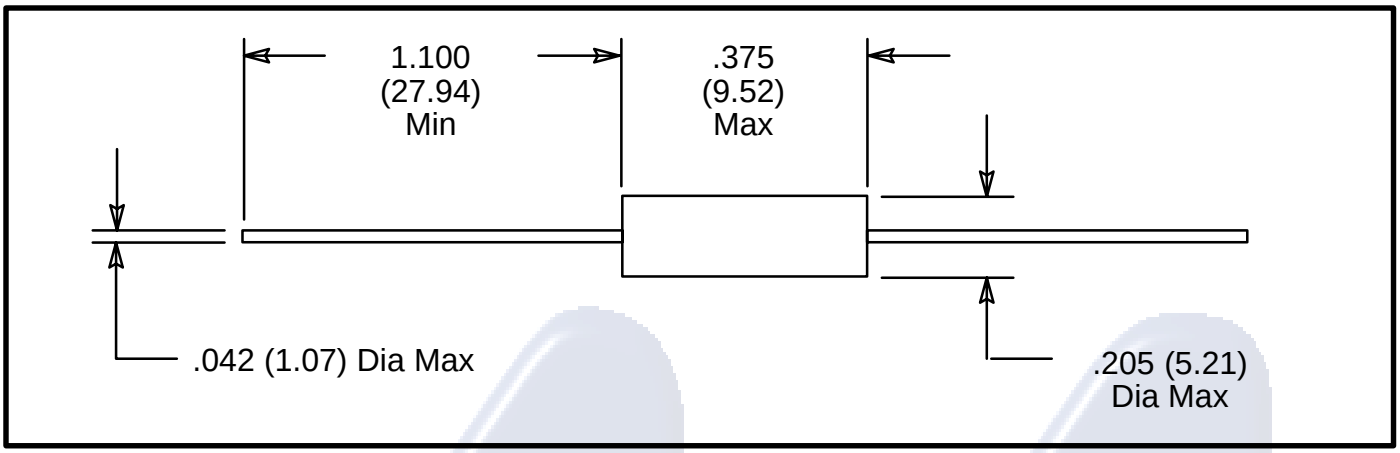

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