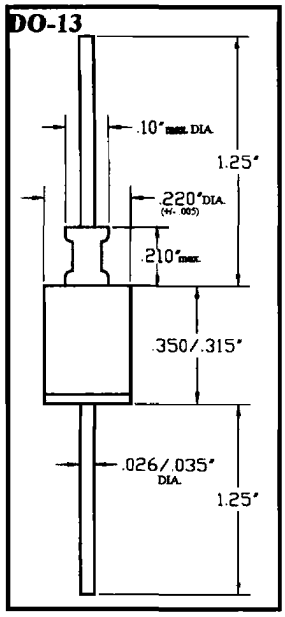
NEW ENGLAND SEMICONDUCTOR

1N5629A thru 1N5665A

1500 WATT SILICON TRANSIENT SUPPRESSOR DIODES

AVAILABLE IN VOLTAGES FROM 5.8V THRU 171V



The NES 1N5629A to 1N5665A series of Silicon Voltage Transient Suppressor diodes are designed to protect airborne and telephone electronic equipment from failure due to high voltage transients. Also, because of their high surge capability and the inherent fast response time of the clamping voltage, which is theoretically instantaneous (1 x 10 to -12 seconds), these devices can also be useful in the protection of Integrated Circuits, Mosfets, Hybrids and other voltage sensitive semiconductors and components.

MAXIMUM RATINGS:

15,000 Watts of Peak Pulse Power Dissipation T_A = @ 25° C

Steady State Power Dissipation: 1.0 watts @ T_L = 75° C, Lead Length = 3/8"

$t_{clamping}$ (0 volts to BV min): $< 1 \times 10^{-12}$ seconds

Forward Surge Rating : 200 amps, 1/20 second @ 25°C

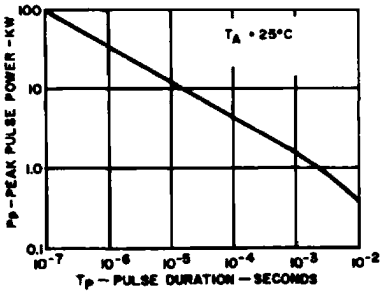
Forward Voltage Drop 3.5 V max @ 100 amps Peak

Operating and Storage Temperature: -65°C to +175°C

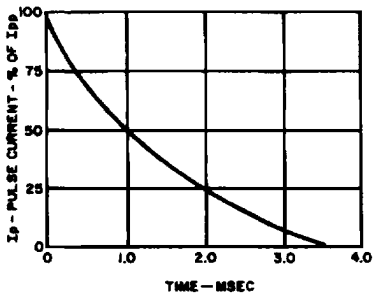
FEATURES:

- DO-13 PACKAGE - GLASS TO METAL HERMETICALLY SEALED
- POSITIVE TERMINAL MARKED WITH BAND
- STANDARD POLARITY - CATHODE TO CASE
- MATTE TIN PLATED
- CUSTOM DESIGNS AVAILABLE — CONSULT FACTORY

MAXIMUM ALLOWABLE PEAK PULSE POWER VS PULSE WIDTH



PULSE CURRENT VS TIME



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1N5629A thru 1N5665A

Part Number*	Reverse Stand-off voltage V_R volts	Breakdown Voltage BV @ volts	I_T mA	Maximum clamping volt @ I_{PP} (1mSec) Vc Volts	Maximum Reverse Leakage I_R @ V_R µA	Maximum Peak Pulse Current I_{PP} A	Max. Volt. Temp. Var of BV mV/ C
1N5629A	5.80	6.8	10	10.5	1000	143	.057
1N5630A	6.40	7.0	10	11.3	500	132	.061
1N5631A	7.02	8.2	10	12.1	200	124	.065
1N5632A	7.78	9.1	1	13.4	50	112	.068
1N5633A	8.55	10.0	1	14.5	10	103	.073
1N5634A	9.40	11.0	1	15.6	5	96	.075
1N5635A	10.2	12.0	1	16.7	5	90	.078
1N5636A	11.1	13.0	1	18.2	5	82	.081
1N5637A	12.8	15.0	1	21.2	5	71	.084
1N5638A	13.6	16.0	1	22.5	5	67	.086
1N5639A	15.3	18.0	1	25.2	5	59.5	.088
1N5640A	17.1	20.0	1	27.7	5	54	.090
1N5641A	18.8	22.0	1	30.6	5	49	.092
1N5642A	20.5	24.0	1	33.2	5	45	.094
1N5643A	23.1	27.0	1	37.5	5	40	.096
1N5644A	25.6	30.0	1	41.4	5	36	.097
1N5645A	28.2	33.0	1	45.7	5	33	.098
1N5646A	30.8	36.0	1	49.9	5	30	.099
1N5647A	33.3	39.0	1	53.9	5	28	.100
1N5648A	36.8	43.0	1	59.3	5	25.3	.101
1N5649A	40.2	47.0	1	64.8	5	23.2	.101
1N5650A	43.6	51.1	1	70.1	5	21.4	.102
1N5651A	47.8	56.0	1	77.0	5	19.5	.103
1N5652A	53.0	62.0	1	85.0	5	17.7	.104
1N5653A	58.1	68.0	1	92.0	5	16.3	.104
1N5654A	64.1	75.1	1	103.0	5	14.6	.105
1N5655A	70.1	82.0	1	113.0	5	13.3	.105
1N5656A	77.8	91.0	1	125.0	5	12.0	.106
1N5657A	85.5	100.0	1	137.0	5	11.0	.106
1N5658A	94.0	110.5	1	152.0	5	9.9	.107
1N5659A	102.0	120.0	1	165.0	5	9.1	.107
1N5660A	111.0	130.5	1	179.0	5	8.4	.107
1N5661A	128.0	150.5	1	207.0	5	7.2	.108
1N5662A	136.0	160.0	1	219.0	5	6.8	.108
1N5663A	145.0	170.5	1	234.0	5	6.4	.108
1N5664A	154.0	180.0	1	246.0	5	6.1	.108
1N5665A	171.0	200.0	1	274.0	5	5.5	.108

*Suffix 'A' indicates ±5% tolerance

No Suffix indicates ±10% tolerance