

Microsemi Corp.

The diode experts

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**DLTS-5
thru
DLTS-30**

TAZ

FEATURES

This series of TAZ devices is packaged in a ceramic, dual-in-line, hermetically sealed package. These components offer 15 protective devices; unidirectional or bidirectional, common buss connections, per package. The dual-in-line is designed specifically for data line protection, at the P.C. board level. TTL and MOS voltages are available for protection of input/output data circuits.

- UNIDIRECTIONAL OR BIDIRECTIONAL
- MULTIPLE TAZ ARRAY
- DUAL-IN-LINE, 16 PIN HERMETIC PACKAGE
- LOW CAPACITANCE
- μ P/mP COMPATIBLE PACKAGE
- VOLTAGE RANGE OF 5V TO 100V AVAILABLE
- COMMON BUSS CONFIGURATION
- MILITARY ENVIRONMENT CAPABILITY

MAXIMUM RATINGS

500 Watts Peak Pulse Power/Position (@ 25°C) (8 x 20 μ s)
 $t_{clamping}$ (0 volts to BV min.) Less than 1×10^{-12} seconds (theoretical)
(unidirectional) 5×10^{-9} seconds (bidirectional) (theoretical)
Operating and Storage Temperatures: -55°C to +150°C
Forward Surge Rating: 10 Amps, 1/120 sec. @ 25°C (unidirectional)
Repetition Rate (duty cycle): .01%

AVAILABLE DEVICE TYPES

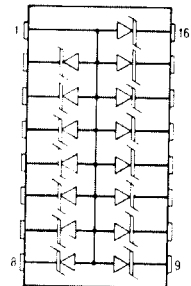
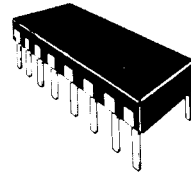
UNIDIRECTIONAL

DLTS-5, A
DLTS-12, A
DLTS-17, A
DLTS-24, A
DLTS-30, A

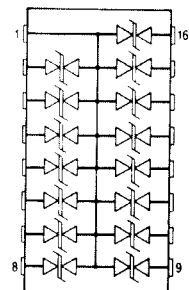
BIDIRECTIONAL

DLTS-8C, CA
DLTS-13C, CA
DLTS-19C, CA
DLTS-30C, CA

DATA LINE TRANSIENT SUPPRESSOR



TYPICAL
UNIDIRECTIONAL
SCHEMATIC



TYPICAL
BIDIRECTIONAL
SCHEMATIC

MECHANICAL CHARACTERISTICS

CASE: Ceramic, 16 pin dual-in-line
(.300" row spacing)

POLARITY: Pin No. 1 marked
with a flag on lead and a dot on
top of package. Body marked
with type number.

WEIGHT: 3.5 grams (Appx.)

DLTS thru DLTS - 30

ELECTRICAL CHARACTERISTICS @ 25°C

| MICROSEMI PART NUMBER | REVERSE STAND-OFF VOLTAGE V_{WM} VOLTS | MINIMUM BREAKDOWN VOLTAGE @ 1 mA $V_{(BR)}$ VOLTS | MAXIMUM CLAMPING VOLTAGE @ $I_{PP2} = 1A$ ($8 \times 20 \mu s$) V_{C1} VOLTS | MAXIMUM CLAMPING VOLTAGE @ $I_{PP2} = 10A$ ($8 \times 20 \mu s$) V_{C2} VOLTS | MAXIMUM REVERSE LEAKAGE @ V_{WM} I_D μA | MAXIMUM CAPACITANCE @ DV 1MHz C pF | MAXIMUM VOLTAGE TEMPERATURE VARIATION OF $V_{(BR)}$ MV/C |
|-----------------------|--|---|--|---|--|------------------------------------|--|
| Unidirectional | | | | | | | |
| DLTS-5 | 5 | 6.0 | 10.2 | 12.5 | 200 | 880 | 5 |
| DLTS-5A | 5 | 6.0 | 9.5 | 10.6 | 200 | 880 | 5 |
| DLTS-12 | 12 | 13.3 | 21.1 | 26.0 | 2 | 440 | 18 |
| DLTS-12A | 12 | 13.3 | 19.1 | 23.5 | 2 | 440 | 18 |
| DLTS-17 | 17 | 19.2 | 30.4 | 37.4 | 2 | 330 | 20 |
| DLTS-17A | 17 | 19.2 | 27.5 | 33.9 | 2 | 330 | 20 |
| DLTS-24 | 24 | 26.7 | 42.3 | 52.1 | 2 | 275 | 31 |
| DLTS-24A | 24 | 26.7 | 38.3 | 47.2 | 2 | 275 | 31 |
| DLTS-30 | 30 | 33.3 | 52.8 | 65.0 | 2 | 220 | 39 |
| DLTS-30A | 30 | 33.3 | 47.8 | 58.8 | 2 | 220 | 39 |
| Bidirectional | | | | | | | |
| DLTS-8C | 8 | 8.5 | 13.4 | 16.6 | 10 | 440 | 9 |
| DLTS-8CA | 8 | 8.5 | 12.2 | 15.0 | 10 | 440 | 9 |
| DLTS-13C | 13 | 14.4 | 22.8 | 28.1 | 4 | 385 | 18 |
| DLTS-13CA | 13 | 14.4 | 20.6 | 25.4 | 4 | 385 | 18 |
| DLTS-19C | 19 | 21.6 | 34.2 | 42.1 | 4 | 275 | 24 |
| DLTS-19CA | 19 | 21.6 | 31.0 | 38.1 | 4 | 275 | 24 |
| DLTS-30C | 30 | 33.3 | 52.8 | 65.0 | 4 | 165 | 39 |
| DLTS-30CA | 30 | 33.3 | 47.8 | 58.8 | 4 | 165 | 39 |

"A", "CA", suffix denotes selected clamping voltage.

NOTE 1: A TAZ is normally selected according to the reverse "Stand Off Voltage" V_{WM} which should be equal to or greater than the DC or continuous peak operating voltage level.

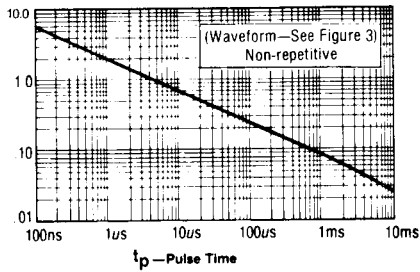


FIGURE 1
PEAK PULSE POWER VS PULSE TIME
(PER POSITION)

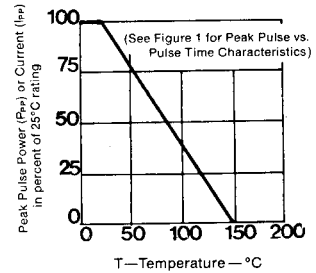


FIGURE 2
DERATING CURVE

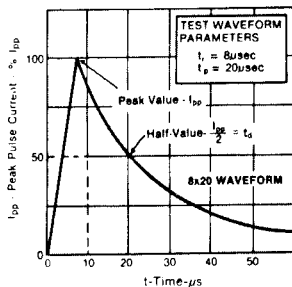
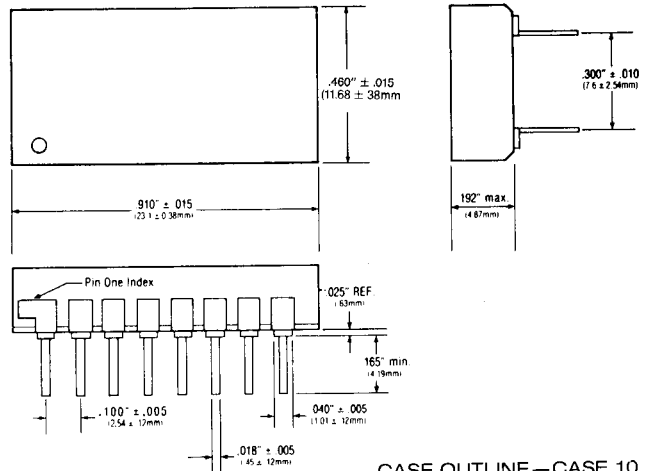


FIGURE 3
PULSE WAVEFORM



CASE OUTLINE—CASE 10