Microsemi Corp.
The diode experts

SANTA ANA, CA

SCOTTSDALE, AZ
For more information call:
(602) 941-6300

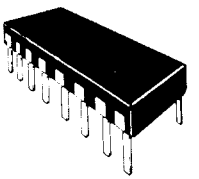
DLTS-5 thru DLTS-30

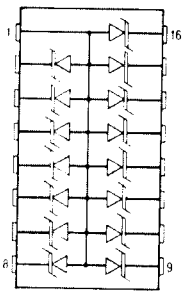
DATA LINE TRANSIENT SUPPRESSOR

FEATURES

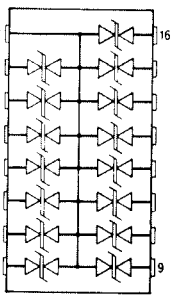
This series of TAZ devices is packaged in a ceramic, dual-in-line, hermetically sealed package. These components offer 15 protective devices; unidirectional or bidirectional, common buss connections, per package. The dual-in-line is designed specifically for data line protection, at the P.C. board level. 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
- μP/mP COMPATIBLE PACKAGE
- VOLTAGE RANGE OF 5V TO 100V AVAILABLE
- COMMON BUSS CONFIGURATION
- MILITARY ENVIRONMENT CAPABILITY





TYPICAL
UNIDIRECTIONAL
SCHEMATIC



TYPICAL
BIDIRECTIONAL
SCHEMATIC

MAXIMUM RATINGS

500 Watts Peak Pulse Power/Position (@ 25°C) (8 x 20μs)
$t_{clamping}$ (0 volts to BV min.) Less than 1 x 10^{-12} seconds (theoretical) (unidirectional) 5 x 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	BIDIRECTIONAL
DLTS-5, A	DLTS-8C, CA
DLTS-12, A	DLTS-13C, CA
DLTS-17, A	DLTS-19C, CA
DLTS-24, A	DLTS-30C, CA
DLTS-30, A	

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 x 20 μs) V_{C1} VOLTS	MAXIMUM CLAMPING VOLTAGE @ I_{PP2} = 10A (8 x 20 μs) V_{C2} VOLTS	MAXIMUM REVERSE LEAKAGE @ V_{WM} I_D μA	MAXIMUM CAPACITANCE @ 0V 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.

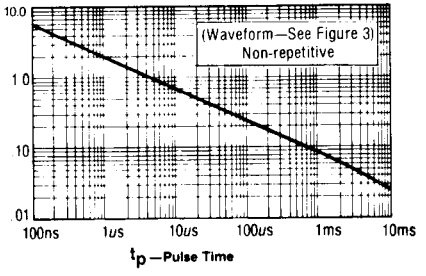


FIGURE 1
PEAK PULSE POWER VS PULSE TIME
(PER POSITION)

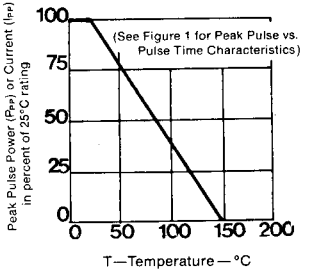


FIGURE 2
DERATING CURVE

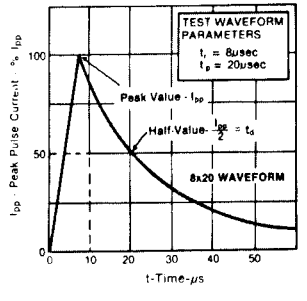
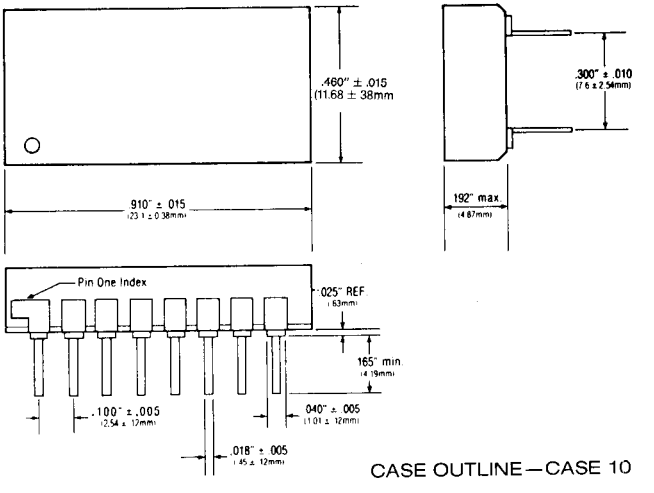


FIGURE 3
PULSE WAVEFORM



CASE OUTLINE—CASE 10