Elektronische Bauelemente

SCT316LD Series

300W Transient Voltage Supperssors Array

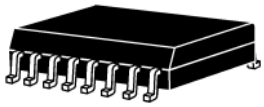
RoHS Compliant Product

Description

The SCT316LD series of monolithic Transient Voltage suppressors are designed for application where voltage transients, caused by electrostatic discharge (ESD) and other induced voltage surges, can permanently damage sensitive conponents.

These TVS diodes are characterized by low capacitance while at the same time retaining their high surge capability, extremely fast response time and low dynamic resistance, The SCT324LD series consists of 8 monolithic bi-directional TVS diode arrays and is specifically designed to protect multiple or single data line with each channel being electrically independent for mutiple I/O port protection.

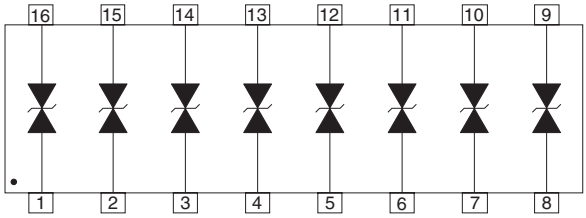
16LD Package



Application

* ESD & surge protection for power lines & I/O ports
* TTL and MOS Bus Lines
* RS-422, RS-432 and RS485 data lines
* High speed logic
* High speed data & video transmission
* Rosh compliant in Lead-Free Versions

CONFIGURATION



Features

* 300 watts Peak pulse power (tp=8 x 20us).
* Protects up to 8 bi-directional line.
* Standoff voltages from 3.3 to 36 volts.
* ESD protection >30KV

Maximum rating and electrical characteristics

Rating	Symbol	Value	Units
Peak ulse Power (tp=8/20us)	P_{pk}	300	Watts
Lead Soldering Temperature	T_L	260 (10 sec.)	℃
Operating Temperature	T_J	-55 to +125	℃
Storage Temperature	T_{STG}	-55 to +150	℃

Electrical Characteristics Per Line @ 25ºC Unless otherwise specified

PART NUMBER	STAND OFF VOLTAGE V_{WM} VOLTS	BREAKDOWN VOLTAGE V_{BR} @1 mA VOLTS MIN	CLAMPING VOLTAGE Vc, @ 1 Amp VOLTS MAX	CLAMPING VOLTAGE Vc, @ 5 Amp VOLTS MAX	LEAKAGE CURRENT I_D,@ V_{WM} µA MAX	CAPACITANCE @0V, 1 MHz pF MAX
SCT316LD03C	3.3	4-5	7	8.5	100	700
SCT316LD05C	5.0	6.1-7.4	9.8	11	12	420
SCT316LD12C	12.0	13.3-16.9	19	24	0.5	150
SCT316LD16C	15.0	16.7-20.4	24	30	0.5	130
SCT316LD24C	24.0	26.7-32.6	43	55	0.5	60
SCT316LD36C	36.0	40.0-47.0	60	75	0.5	60

NOTE: Transient Voltage Suppression (TVS) product is normally selected based on its stand off Voltage V_{WM}. Product selected voltage should be equal to or greater than the continuous peak operating voltage of the circuit to be protected.

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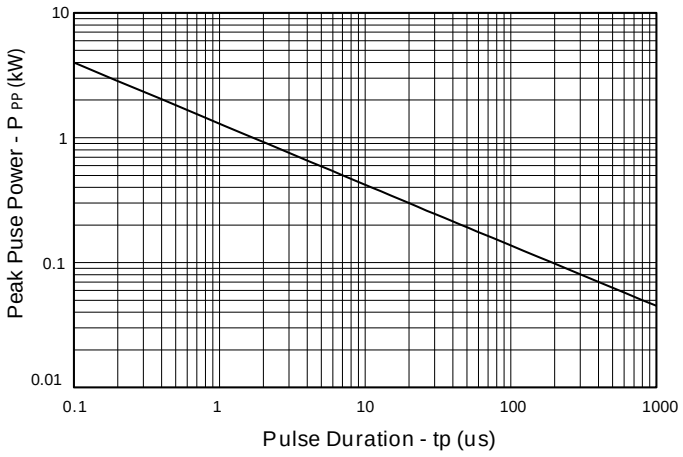
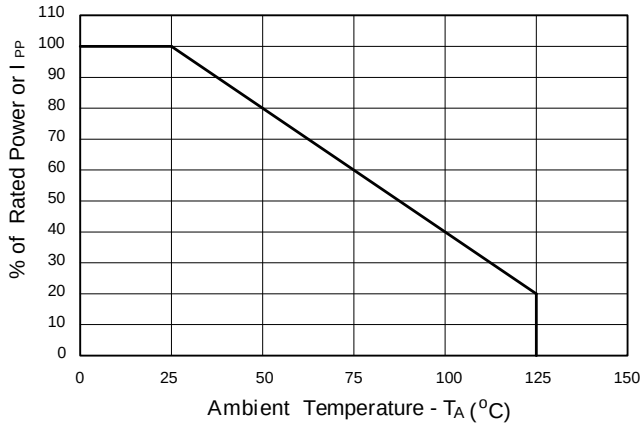
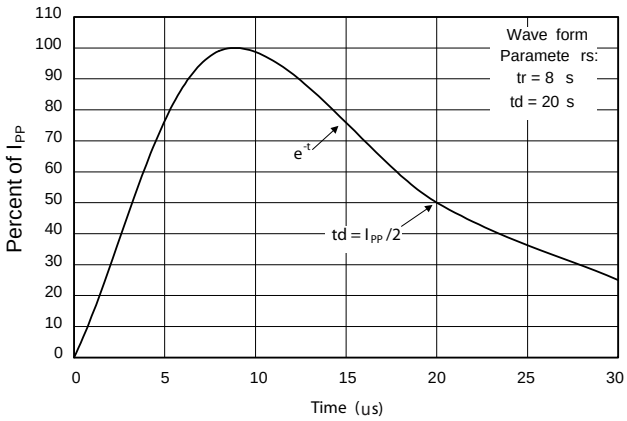
Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve



Pulse Waveform



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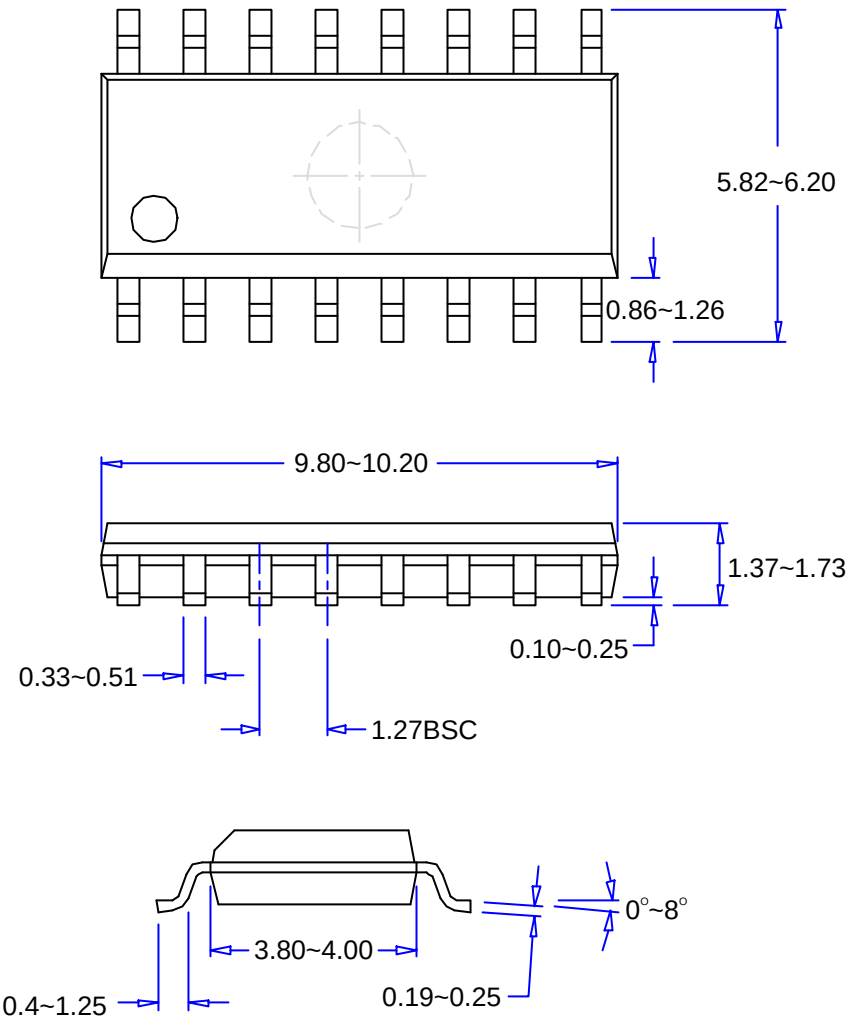
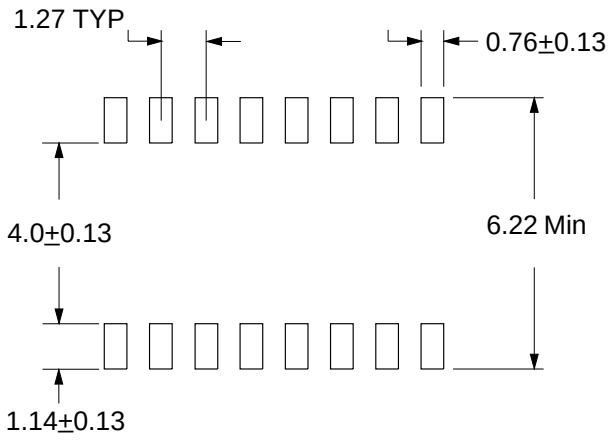
Out Drawing



Suggested Pad Layout



All dimensions in Millimeters