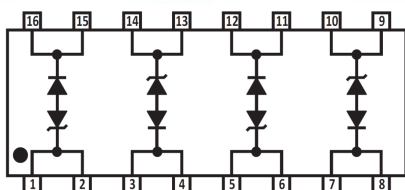
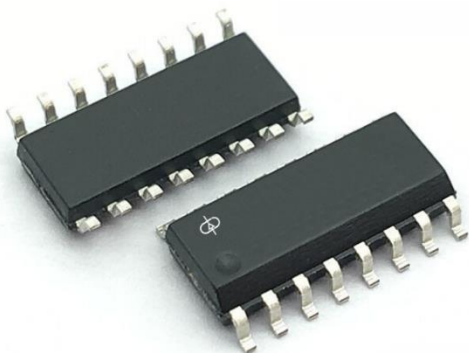


LOW CAPACITANCE TVS DIODE ARRAY

DESCRIPTION:



The ALPESLCXVP16 is Low Capacitance TVS Diode Array, Protects two-line pairs (fours lines). It has Low leakage current and clamping voltage and Low capacitance.

The ALPESLCXVP16 is suited for using in transmission equipment, telecommunications, and switches.

FEATURES:

- 5500 Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
- 400 Watts Peak Pulse Power per Line ($t_p=10/1000\mu s$)
- Protects two-line pairs (fours lines)
- Low leakage current and clamping voltage
- Low capacitance
- IEC 61000-4-2 (ESD)
 - $\pm 8kV$ Contact Discharge
 - $\pm 15kV$ Air Discharge
- IEC 61000-4-4 EFT Protection
 - 40A (5/50ns)
- IEC 61000-4-5 (Lightning)
 - 150A (8/20 μs)
- RoHS compliant

APPLICATIONS:

- T-1/E-1, ISDN, and xDSL transmission equipment
- Telecommunications infrastructure
- PBX's and other switches
- Set-top box
- VoIP

MECHANICAL CHARACTERISTICS

- Epoxy: UL94-V0 rated flame retardant.
- Case: Molded plastic, SOP-16
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

ABSOLUTE MAXIMUM RATINGS

MAXIMUM RATINGS @ $T_A = 25^\circ\text{C}$ unless otherwise specified			
PARAMETER	SYMBOL	VALUE	UNIT
Peak pulse power ($t_p=8/20\mu\text{s}$)	P_{PP}	5500	W
Peak Pulse Power ($t_p=10/1000\mu\text{s}$)	P_{PP}	400	W
ESD (IEC61000-4-2 air discharge)	V_{ESD}	± 15	kV
ESD (IEC61000-4-2 contact discharge)		± 8	
Operating Junction Temperature Range	T_J	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS
ELECTRICAL CHARACTERISTICS @ $T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise specified

PART NUMBER	V_{RWM}	$I_R @ V_{RWM}$	MIN BREAKDOWN VOLTAGE $V_{BR} @ 1\text{mA}$	MAX CLAMPING VOLTAGE @8/20 μS $V_C @ I_{PP}$		TYPICAL $C_J @ 0\text{V},$ 1MHz
	Volts	μA	Volts	Volts	A	pF
ALPESLC5VP16	5	300	6	26	150	15
ALPESLC6V5P16	6.5	300	7.2	28	150	15
ALPESLC12VP16	12	2	13.3	35	140	15
ALPESLC15VP16	15	2	16.7	50	110	15
ALPESLC24VP16	24	2	26.7	57	80	15

TYPICAL DEVICE RATING AND CHARACTERISTICS CURVES ($T_A = 25^\circ\text{C}$ unless otherwise noted)

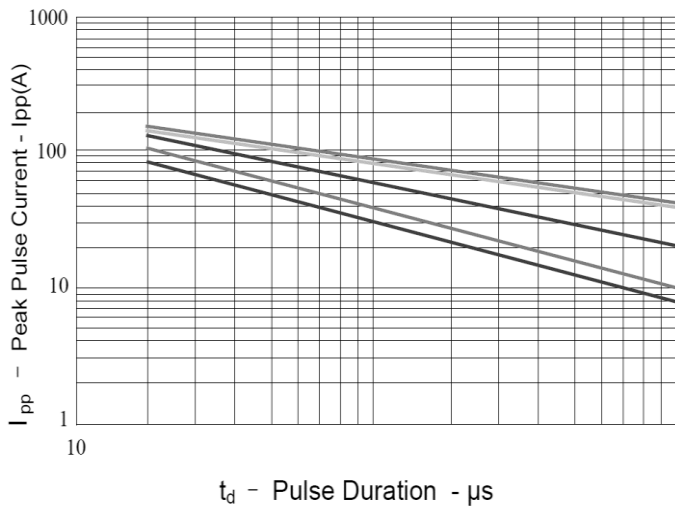


Fig.1 PEAK PULSE CURRENT VS. PULSE TIME

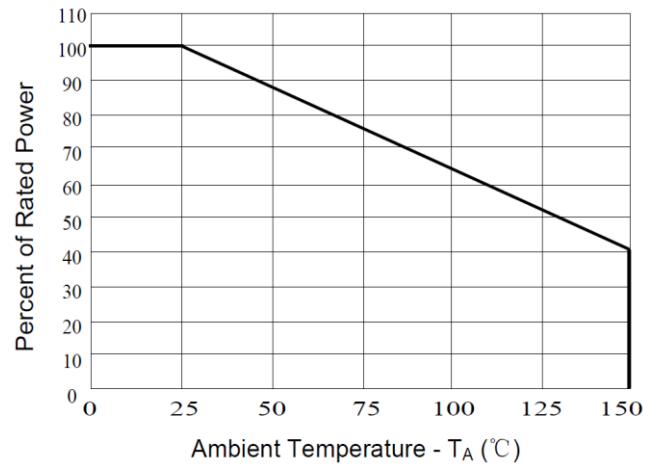


Fig.2 PULSE DERATING CURVE

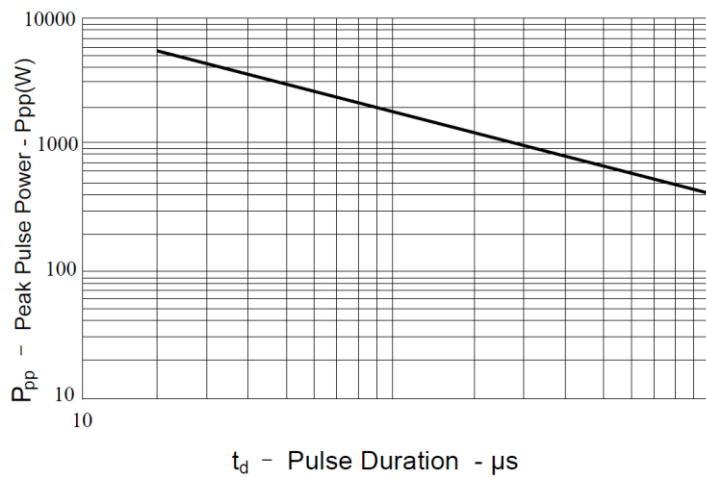


Fig.3 PEAK PULSE POWER VS. PULSE TIME

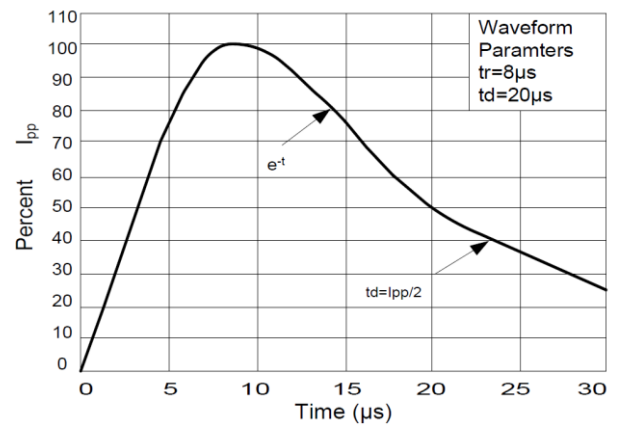
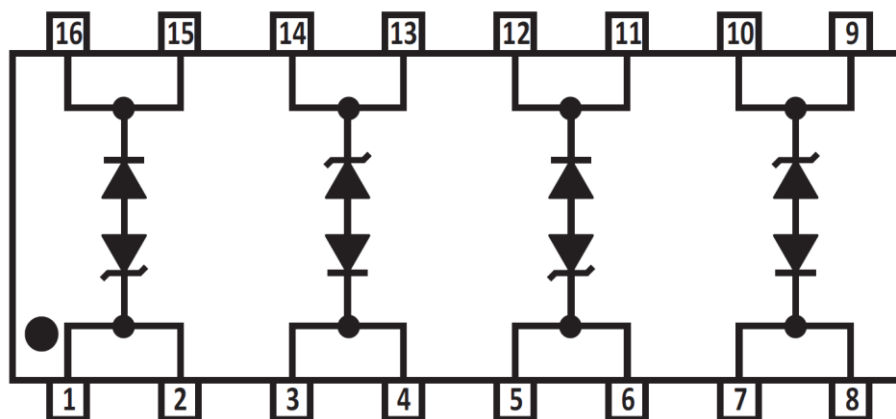
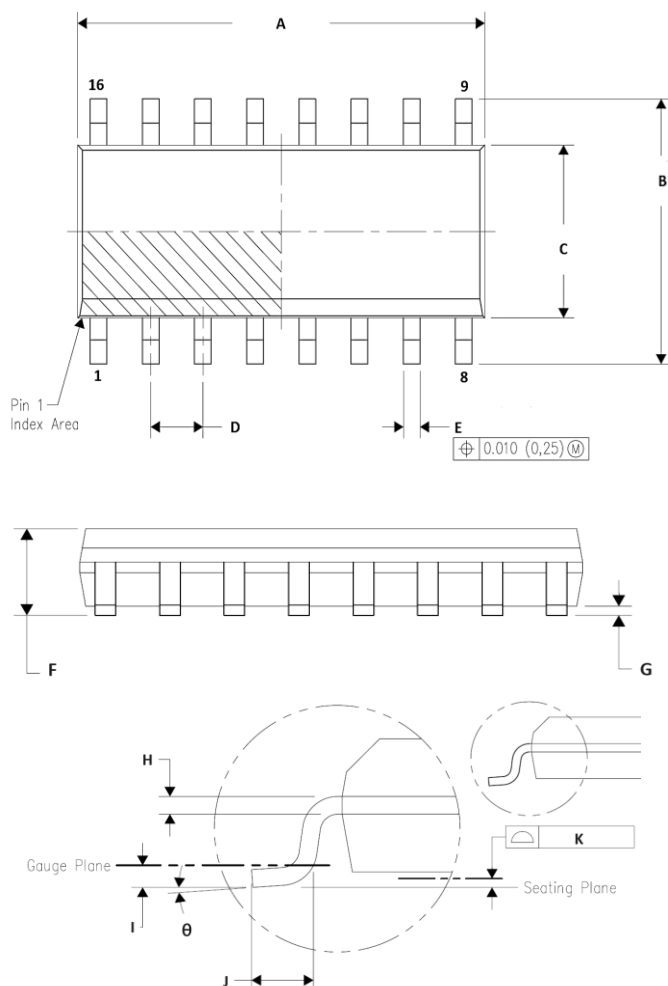


Fig.4 PULSE WAVEFORM

PINNING INFORMATION

SCHEMATIC DIAGRAM



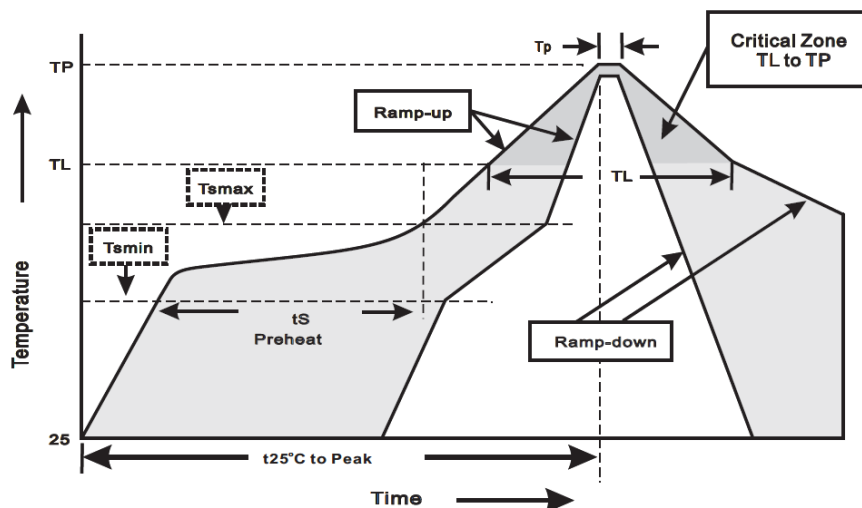
PACKAGE INFORMATION
SOP-16


OUTLINE DIMENSIONS				
SYMBOL	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.80	10.00	0.386	0.394
B	5.80	6.20	0.228	0.244
C	3.80	4.00	0.150	0.157
D	1.27		0.050	
E	0.31	0.51	0.012	0.020
F	1.75		0.069	
G	0.10	0.25	0.004	0.010
H	0.13	0.25	0.005	0.010
I	0.25		0.010	
θ	0°	8°	0°	8°
J	0.40	1.27	0.016	0.050
K	0.10		0.004	
Note: 1. Controlling dimension: in millimeters. 2. General tolerance: ±0.05mm				

SOLDERING PARAMETERS

SUGGESTED THERMAL PROFILES FOR SOLDERING PROCESSES

1. Storage environment: Temperature=5 °C~40 °C Humidity=55% ±25%
2. Reflow soldering of surface-mount devices



3. Reflow soldering

PROFILE FEATURE	SOLDERING CONDITION
Average ramp-up rate (T_L to T_P)	<3 °C/sec
Preheat	
- Temperature Min (T_{smin})	150 °C
- Temperature Max (T_{smax})	200 °C
- Time (min to max) (t_s)	60 ~ 120 sec
T_{smax} to T_L	
- Ramp-upRate	<3 °C/sec
Time maintained above:	
- Temperature (T_L)	217 °C
- Time(t_L)	60 ~ 260 sec
Peak Temperature (T_P)	255 °C-0/+5 °C
Time within 5 °C of actual Peak Temperature(t_P)	10 ~ 30 sec
Ramp-down Rate	<6 °C/sec
Time 25 °C to Peak Temperature	<6 minutes



beyond boundaries...

ALPESLCXVP16

SOP-16

CUSTOMER NOTE:

DISCLAIMER

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1. ALPINESEMI™ Semiconductor Devices are RoHS compliant and hence customers are requested to dispose as per the prevailing Environmental Legislation put forth in their specific country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).



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