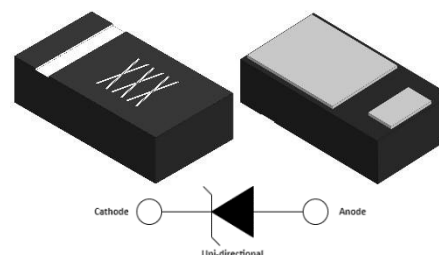


Low Clamping + Low Profile 600W Transient Voltage Suppressor (3719)

LTS3D2V5FT
LTS3D3V0FT
LTS3D3V3FT
LTS3D4V0FT

Package 2-VDFN (3719)



H/F RoHS COMPLIANT **Pb** **e3**

FEATURE

- 600W peak pulse power capability at 10/1000 μ s waveform, repetition rate (duty cycle): 0.01%
- Compatible with industrial standard package SOD-123HE
- Low profile: maximum height of 0.9 mm.
- For surface mounted applications to optimize board space
- Whisker test is conducted based on JEDEC JESD201A per its table 4a and 4c
- IEC-61000-4-2 ESD 30kV(Air), 30kV (Contact)
- ESD protection of data lines in accordance with IEC 61000-4-2
- EFT protection of data lines in accordance with IEC 61000-4-4
- Fast response time: typically less than 1.0ns from 0 Volts to VBR min.
- High temperature soldering: 260°C/40 seconds at terminals
- Pb-free E3 means 2nd level interconnect is Pb-free and the terminal finish material is tin (Sn) (IPC/JEDEC J-STD-609A.01)

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	UNIT
Peak Pulse Power ($t_P = 10/1000 \mu\text{s}$)	P_{PPM}	600	W
Operating Temperature Range	T_J	-65 to 150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to 150	$^\circ\text{C}$
Thermal Resistance Junction- to- Ambient	$R_{\theta JA}$	120	$^\circ\text{C/W}$

*VBR measured after IT applied for 300 μ s, IT = square wave pulse or equivalent.

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

Part Number	Marking Code	Breakdown Voltage VBR (Volts) @ IT		Test Current IT (mA)	Reverse Stand-off Voltage VR (V)	Maximum Reverse Leakage @VR IR(μ A)	Maximum Peak Pulse Current (10/1000 μ s) Ipp (A)	Maximum Clamping Voltage @Ipp (10/1000 μ s) VC (V)
		Min.	Max.					
LTS3D2V5FT	256	2.6	3.3	10	2.5	0.5	115	5.3
LTS3D3V0FT	306	3.1	3.7	10	3.0	0.5	108	5.6
LTS3D3V3FT	336	3.4	4.3	10	3.3	0.5	98	6.2
LTS3D4V0FT	406	4.3	4.8	10	4.0	0.2	83	7.4

*Surge current waveform per 10/1000 μ s exponential wave and derated per Fig.2.

*Non-repetitive current pulse (10/1000 μ s), derated above T_J initial 25°C per Fig.3.

*All terms and symbols are consistent with ANSI/IEEE C62.35.

RATINGS AND CHARACTERISTIC CURVES ($T_A=25^\circ\text{C}$ unless otherwise noted)

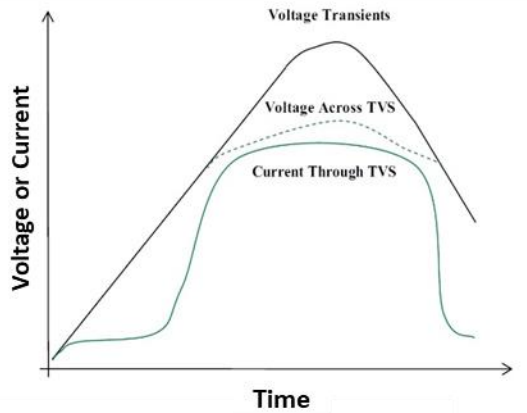


Figure 1 TVS Transients Clamping Waveform

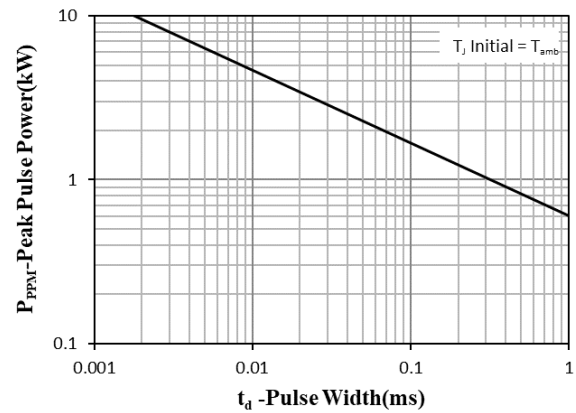


Figure 2 Peak Pulse Power Rating Curve

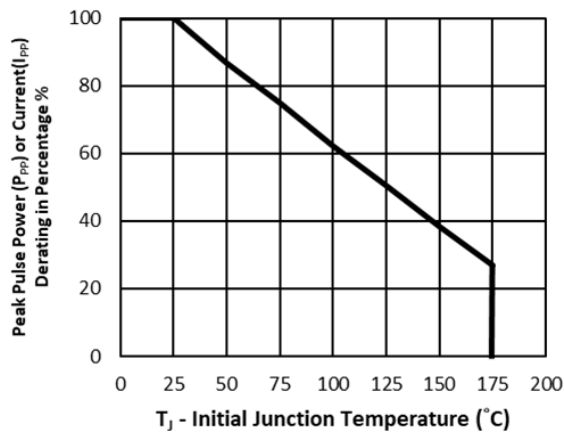


Figure 3 Peak Pulse Power Derating Curve

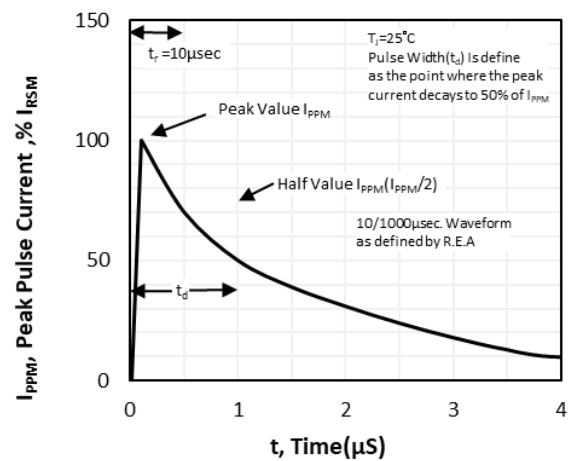
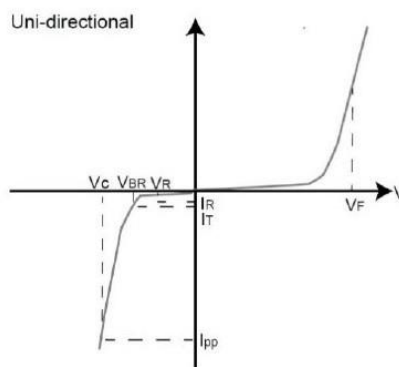


Figure 4 10/1000 μs Pulse Waveform

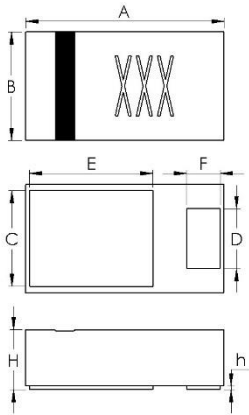


Symbol	Parameter
P_{PPM}	Max. Peak Pulse Power Dissipation
V_R	Stand-off Voltage
V_{BR}	Breakdown Voltage
V_C	Clamping Voltage
I_R	Reverse Leakage Current
V_F	Forward Voltage

Note : V_F distribution range from 7V to 30V at IF 1mA

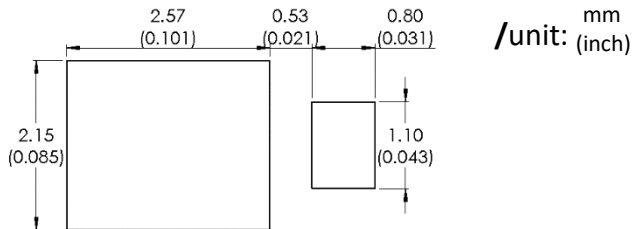
Figure 5 IV Curve Characteristics

2-VDFN (3719) PACKAGE OUTLINE DIMENSIONS



Symbol	Millimeters			Inches		
	Min	Typ.	Max	Min	Typ.	Max
A	3.60	3.70	3.80	0.142	0.146	0.150
B	1.80	1.90	2.00	0.071	0.075	0.079
C	1.50	1.60	1.70	0.059	0.063	0.067
D	0.70	0.80	0.90	0.028	0.031	0.035
E	2.22	2.32	2.42	0.087	0.091	0.095
F	0.45	0.55	2.65	0.018	0.022	0.104
H	0.70	0.80	0.90	0.028	0.031	0.035
h	-	0.05	-	-	0.002	-

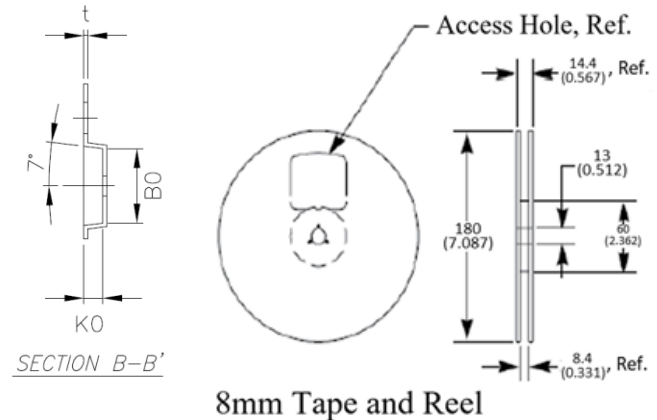
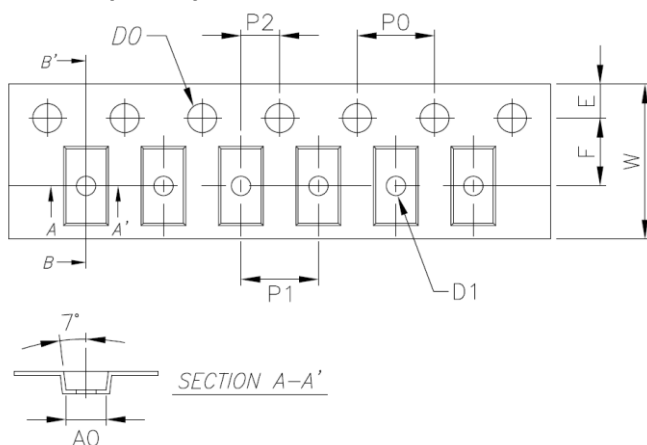
2-VDFN (3719) SUGGESTED PAD LAYOUT



2-VDFN (3719) TAPE AND REEL

Component Package	Quantity	Packaging Option	Packaging Specification
2-VDFN (3719)	3000	Tape & Reel – 8mm tape/7" reel	EIA RS-481

2-VDFN (3719) PACKAGE TAPEING DIMENSION



Symbol	A0	B0	W	E	F	D0	D1	P1	P0	P2	K0	t
(mm)	2.07 ±0.10	3.85 ±0.10	8.00 +0.30 -0.10	1.75 ±0.10	3.50 ±0.05	1.50 +0.10 -0.00	1.00 ±0.10	4.00 ±0.10	4.00 ±0.10	2.00 ±0.05	0.97 ±0.10	0.20 ±0.05
(Inch)	0.081 ±0.004	0.152 ±0.004	0.315 +0.012 -0.004	0.069 ±0.004	0.138 ±0.002	0.059 +0.004 -0.000	0.039 ±0.004	0.157 ±0.004	0.157 ±0.004	0.079 ±0.002	0.038 ±0.004	0.008 ±0.002

Low Clamping and Low Profile LTS Series 600W (3719)

Part Number System

LTS	3D	3V3	F	T																								
Series	Package	VR Voltage	Peak Pulse Power	Packaging Option																								
Lumimax Low Clamping and Low Profile TVS Diode	<table><tr><td>3D</td><td>3719mm</td></tr><tr><td>2D</td><td>2614mm</td></tr></table>	3D	3719mm	2D	2614mm	<table><tr><td>3V3</td><td>3.3V</td></tr><tr><td>4V7</td><td>4.7V</td></tr><tr><td>10V</td><td>10V</td></tr><tr><td>100V</td><td>100V</td></tr></table>	3V3	3.3V	4V7	4.7V	10V	10V	100V	100V	<table><tr><td>B</td><td>200W</td></tr><tr><td>D</td><td>400W</td></tr><tr><td>F</td><td>600W</td></tr><tr><td>H</td><td>800W</td></tr></table>	B	200W	D	400W	F	600W	H	800W	<table><tr><td>T</td><td>Taped on Reel</td></tr><tr><td>B</td><td>Bulk</td></tr></table>	T	Taped on Reel	B	Bulk
3D	3719mm																											
2D	2614mm																											
3V3	3.3V																											
4V7	4.7V																											
10V	10V																											
100V	100V																											
B	200W																											
D	400W																											
F	600W																											
H	800W																											
T	Taped on Reel																											
B	Bulk																											

All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.