

ESD PROTECTION DEVICE

STAND-OFF VOLTAGE – 3.3 Volts
POWER DISSIPATION - 2400 WATTS

GENERAL DESCRIPTION

The L2KE3V3K8-2 transient voltage suppressor is designed to protect components which are connected to high speed data and telecommunication lines from voltage surges caused by lightning, electrostatic discharge (ESD), and electrical fast transients (EFT)..

FEATURES

- Protects two line pairs.
- Low operating and clamping voltages
- IEC 61000-4-2, > ±27KV (air) ; > ±27KV (contact).
- IEC 61000-4-2, level 4 (ESD), > ±15KV (air) ; > ±8KV (contact).
- IEC 61000-4-5 (Lightning), 100A (8/20 us)

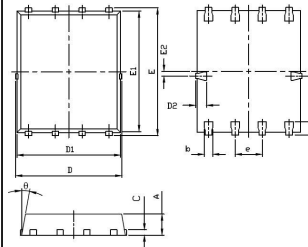
APPLICATION

- 10/100 Etherent
- Set-Top Box
- ISDN interface

MECHANICAL DATA

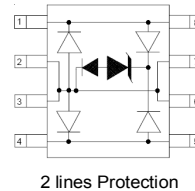
- Case Material: "Green" molding compound UL flammability classification 94V-0 (No Br,Sb, Cl)
- Terminals: Lead Free Plating (Matte Tin Finish)
- Component in accordance to RoHs 2002/95/E

POWER56



POWER56		
DIM.	MIN.	MAX.
A	0.95	1.05
B	0.30	0.50
C	0.254	
D	5.02	
D1	4.80	5.00
D2	0.51 REF.	
E	5.95	6.15
E1	5.60	5.90
E2	0.225 REF.	
e	1.27 REF.	
L	0.38	0.58
θ	10°	

All Dimensions in millimeter



PIN ASSIGNMENT	
1(8), 4(5)	Data Lines
2, 3, 6, 7	Ground

MAXIMUM RATINGS (Tj= 25°C unless otherwise noticed)

Rating	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20us)	P _{pk}	2400	W
Peak Pulse Current (tp = 8/20us)	I _{pp}	100	A
Operating Junction Temperature Range	T _J	-55 to + 125	°C
Storage Temperature Range	T _{stg}	-55 to + 150	°C
Soldering Temperature, t max = 10s	T _L	260	°C

ELECTRICAL CHARACTERISTICS (Tj= 25°C unless otherwise noticed)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse standoff voltage	V _{RWM}				2.8	V
Punch-Through Voltage	V _{PT}	I _{PT} = 2uA	3.5			V
Snap-Back Voltage	V _{SB}	I _{SB} = 50mA	2.8			V
Reverse leakage current	I _{RM}	V _{DRM} = 3.3V			1	uA
Clamping Voltage	V _C	I _{PP} = 50A, tp = 8/20µs, Any line to GND			11.5	V
		I _{PP} = 50A, tp = 8/20µs, Line to Line			15	V
		I _{PP} = 100A, tp = 8/20µs, Any line to GND			16	V
		I _{PP} = 100A, tp = 8/20µs, Line to Line			24	V
Junction capacitance	C _J	V _R = 0V, f = 1MHz, Line to Line		2.5	6.0	pF
		V _R = 0V, f = 1MHz, Any line to GND		5.0	12	pF

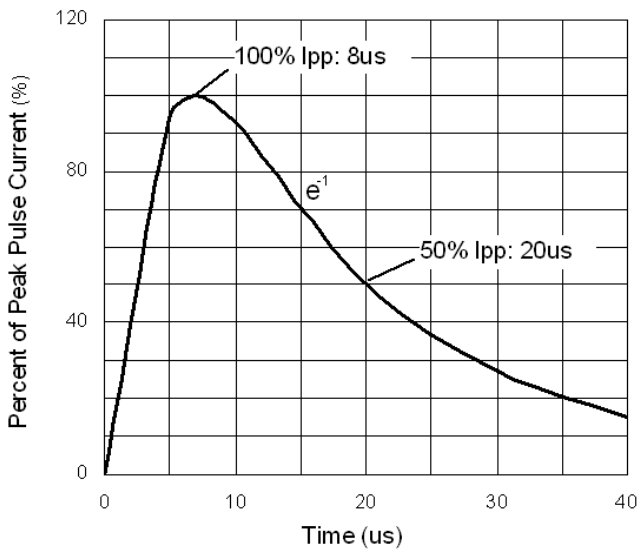


Figure 1. 8/20 us pulse waveform according to IEC 61000-4-5

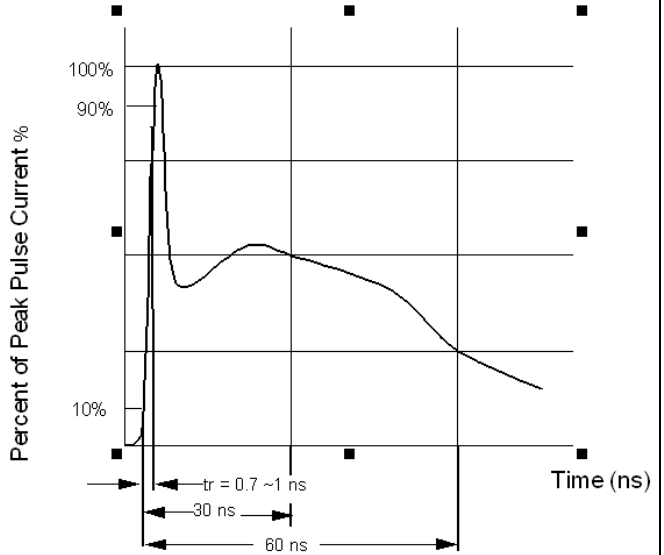


Figure 2. ESD pulse waveform according to IEC 61000-4-2

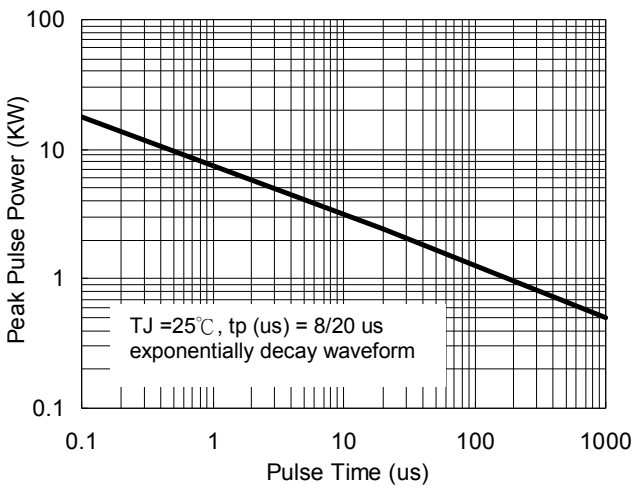


Figure 3. Power Dissipation versus Pulse Time

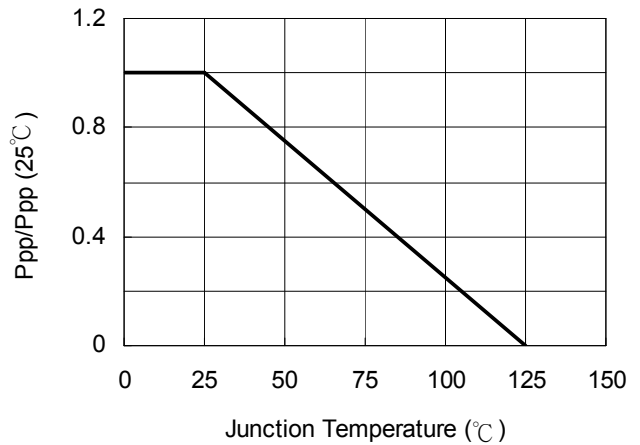


Figure 4. Peak pulse power versus TJ

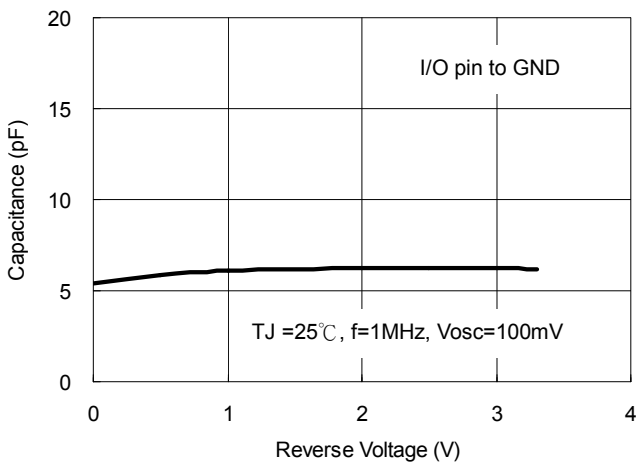


Figure 5. Typical Junction Capacitance

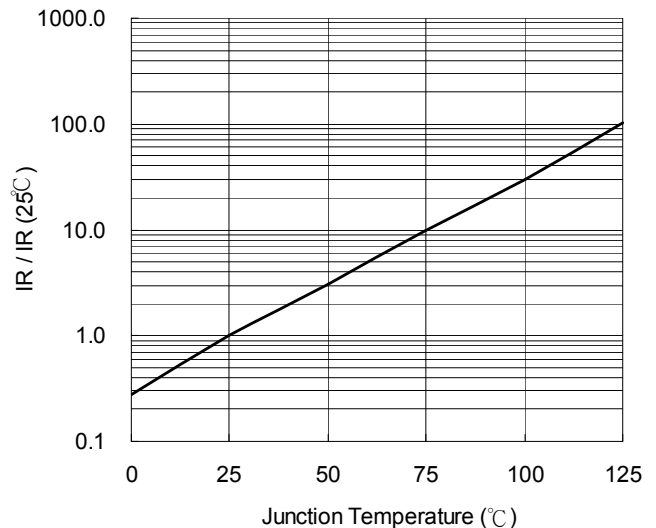


Figure 6. Reverse Leakage Current versus TJ

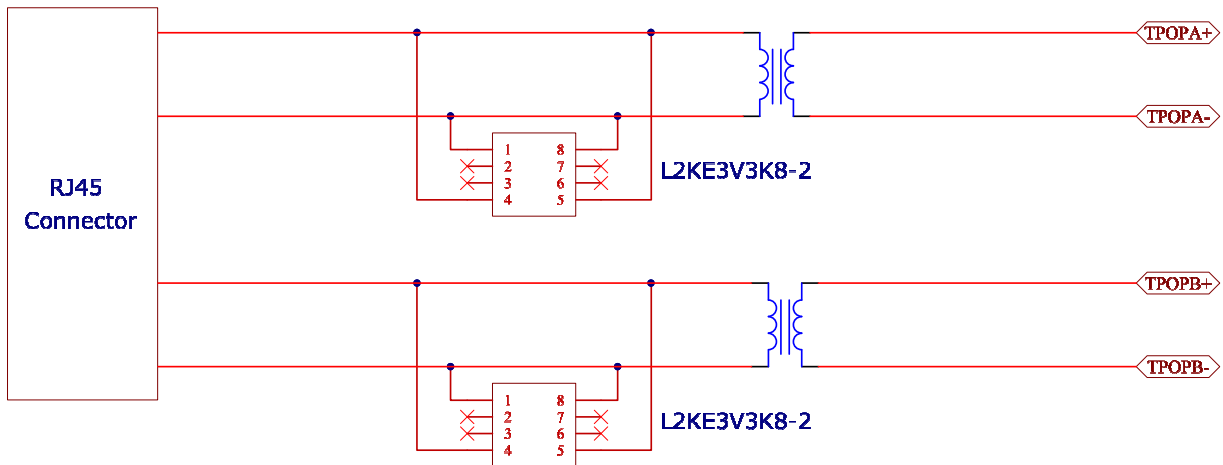


Figure 7. RJ45 10/100 Interface ESD and Lightning Protection (Line to Line)

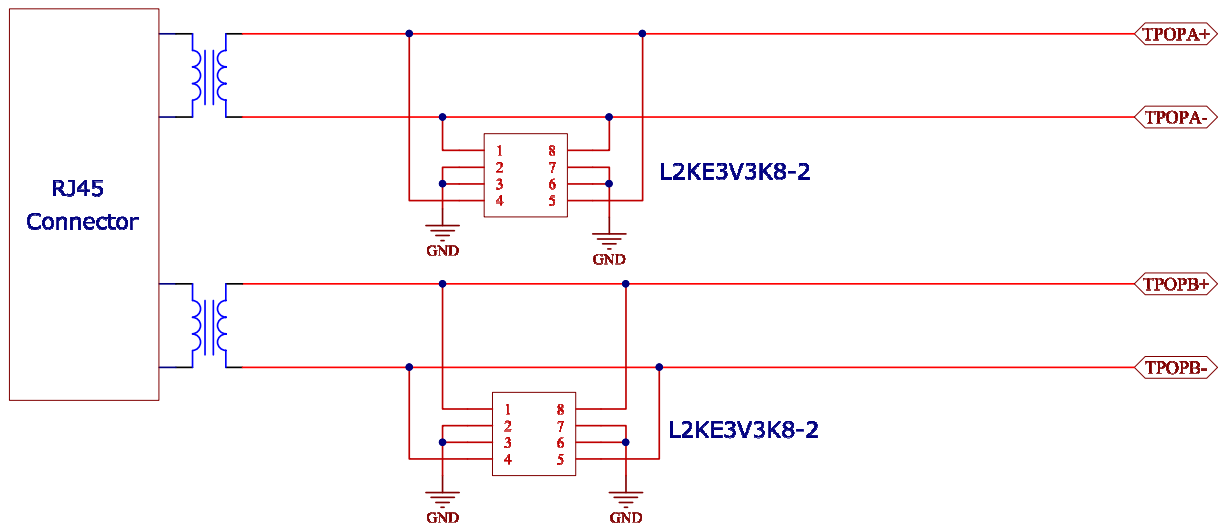
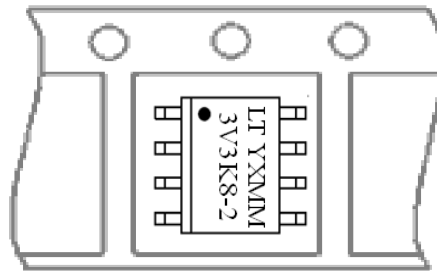


Figure 8. RJ45 10/100 Interface ESD and Lightning Protection (Line to GND)

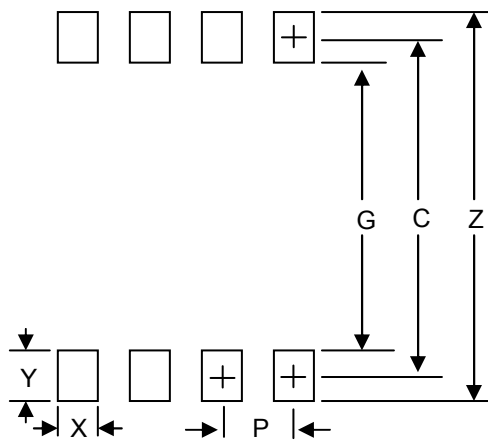
Marking & Orientation



Packaging Information

DEVICE	Q'TY/REEL (PCS)	REEL DIA. (INCH)	Q'TY/BOX (PCS)	Q'TY/CARTON (PCS)
L2KE3V3K8-2	3000	13	6000	48K

POWER56 Soldering Pad Layout



Dim.	Millimeters	Inches
C	5.5	0.217
G	4.65	0.183
P	1.27	0.050
X	0.55	0.022
Y	0.85	0.034
Z	6.35	0.250

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