

Features

- Bi-directional ESD protection of two lines
- 40Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 24V
- Low capacitance between I/O pins: 0.95pF(typ)
- IEC 61000-4-2 $\pm 25kV$ contact $\pm 25kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)

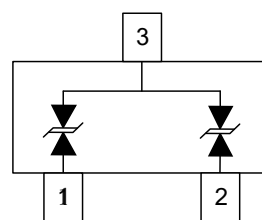
Applications

- Open Alliance IEEE 100/1000BASE-T1 Ethernet
- Low-Voltage Differential Signaling(LVDS)
- Automotive

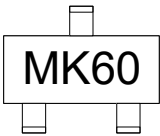
Mechanical Data

- Package:SOT-23
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	Packing	Reel Size
PESD2ETH1G	SOT-23		3000 Tape & Reel	7 inches

Absolute Maximum Rating($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	25 25	kV
Lead Soldering Temperature	T_L	260(10seconds)	$^{\circ}\text{C}$
Junction Temperature	T_J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +125	$^{\circ}\text{C}$

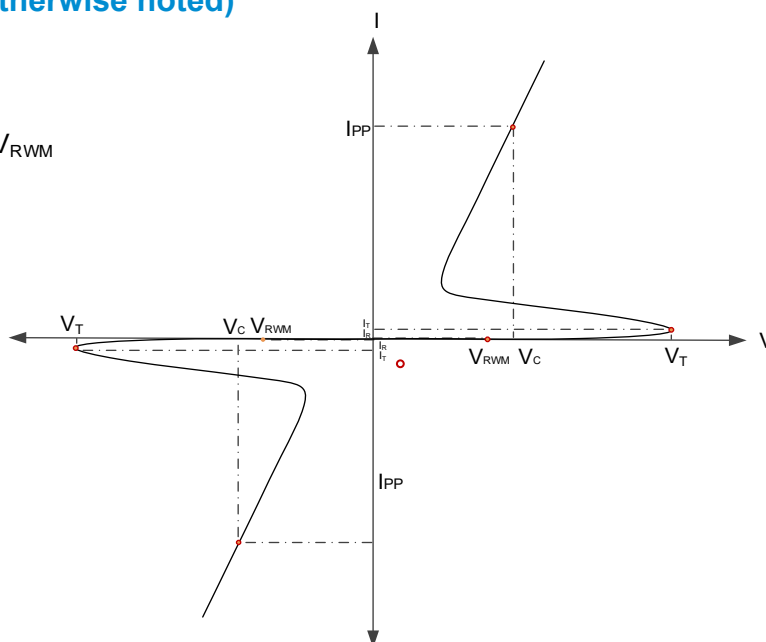
Electrical Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				24	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	100			V
Reverse Leakage Current	I_R	$V_{\text{RWM}}=24\text{V}$			0.1	μA
ESD Dynamic Resistance	R_{DYN}	$t_p=0.2/100\text{ns}$		0.25		Ω
Clamping Voltage	V_C	$I_{\text{TLP}}=4\text{A}, t_p=0.2/100\text{ns}$		29.5		V
Clamping Voltage	V_C	$I_{\text{TLP}}=16\text{A}, t_p=0.2/100\text{ns}$		32.5		V
Junction Capacitance	C_J	I/O to GND; $V_R=0\text{V}$; $f=1\text{MHz}$		2.0	2.5	pF
Junction Capacitance	C_J	Between I/O; $V_R=0\text{V}$; $f=1\text{MHz}$		0.95	1.2	pF



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

- V_{RWM} Reverse Working Voltage Max.
 I_R Maximum Reverse Leakage Current @ V_{RWM}
 V_{BR} Reverse Breakdown Voltage
 I_{PP} Maximum Reverse Peak Pulse Current
 V_C Clamping Voltage @ I_{PP}



Typical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise Specified)

Figure 1: Power Derating Curve

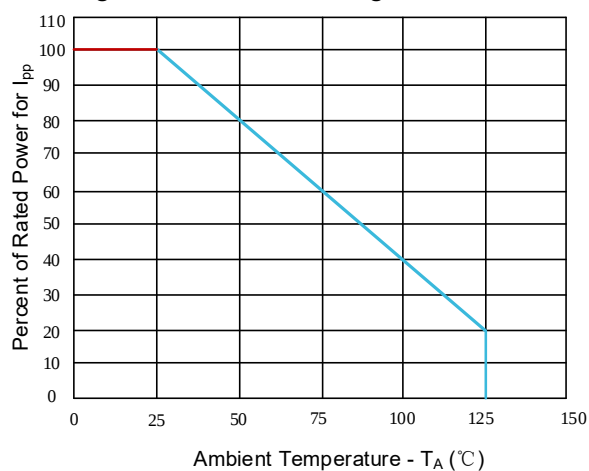


Figure 2: Pulse Waveform-ESD(IEC61000-4-2)

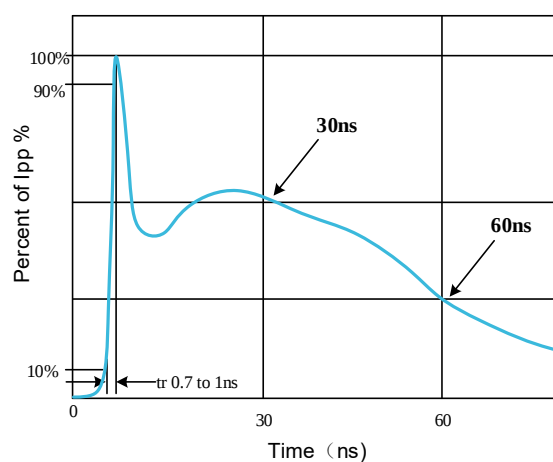


Figure 3: TLP Positive I-V Curve

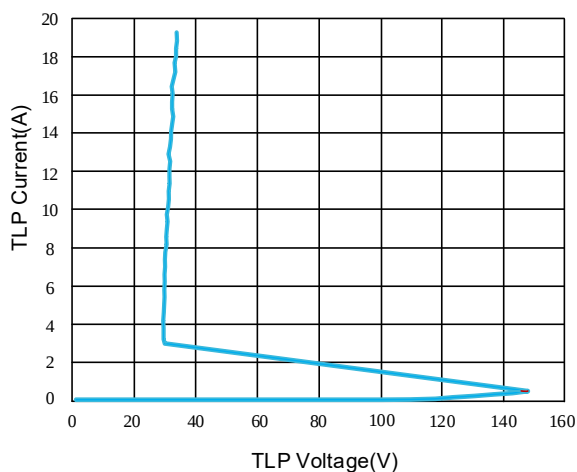
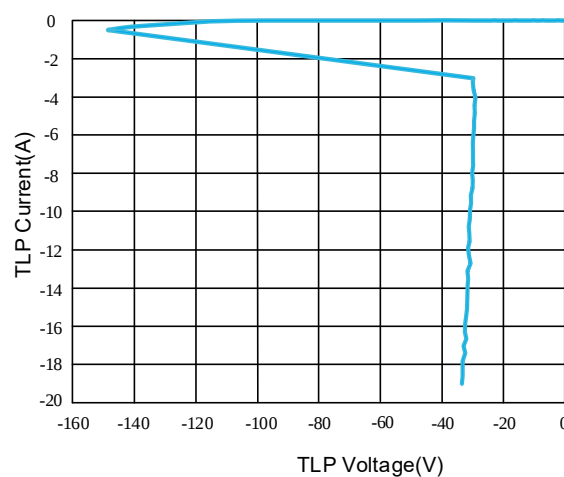
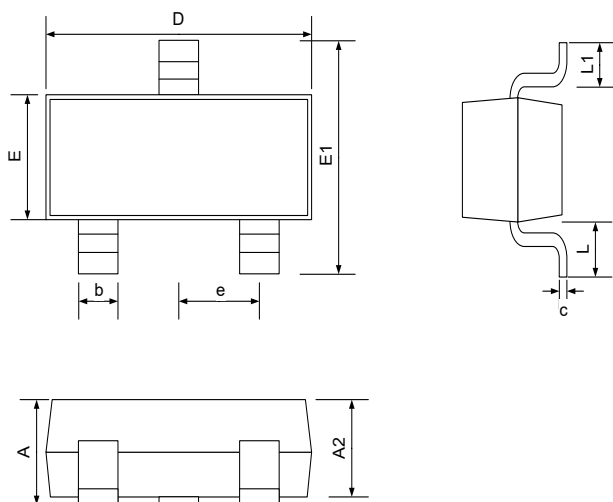


Figure 4: TLP Negative I-V Curve





Outline Drawing – SOT-23



COMMON DIMENSION (mm)			
PKG	SOT23		
REF.	MIN.	NOM.	MAX.
A	0.900		1.150
A2	0.900		1.050
b	0.300		0.500
c	0.080		0.150
D	2.800		3.000
E	1.200		1.400
E1	2.250		2.550
e		0.950	
L		0.550	
L1	0.300		0.500