

Features

- ESD / transient protection of high speed data lines exceeding:
 - IEC61000-4-2 (ESD): ± 20 kV (air / contact)
 - IEC61000-4-4 (EFT): 2.5 kV / 50 A (5/50 ns)
 - IEC61000-4-5 (surge): 3 A (8/20 μ s)
- Maximum working voltage: $V_{RWM} = 3.3$ V
- Ultra low capacitance $C_L = 0.4$ pF (typical)
- Very low clamping voltage: $V_{CL} = 8$ V at $I_{PP} = 16$ A (typical)
- Very low dynamic resistance: $R_{DYN} = 0.19$ Ω (typical)
- Pb-free and halogen-free package (RoHS compliant)

Mechanical Characteristics

- Package: 0201
- Lead Finish: Matte Tin
- UL Flammability Classification Rating 94V-0
- Marking:K

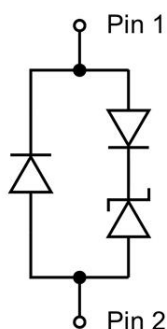
Applications

- Digital Visual Interface (DVI)
- 10/100/1000 Ethernet
- USB 1.1/2.0/3.0/OTG
- IEEE 1394 Firewire Ports
- Projection TV Monitors and Flat Panel Displays
- Notebook Computers
- Set Top Box
- Projection TV

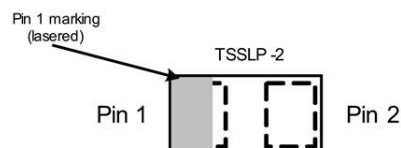
Ordering Information

Part Number	Qty per Reel	Reel Size
ESD3V3U04-0201	15000	7"

Pin Configuration



Circuit Diagram



PROTECTION PRODUCTS

Absolute Maximum Rating

(Temp=25°C Unless Otherwise Specified)			
Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P _{PPP}	150	Watts
Peak Pulse Current(tp=8/20μs waveform)	I _{PP}	3	A
ESD Rating per IEC61000-4-2:	Contact	20	KV
	Air	20	
Lead Soldering Temperature	T _L	260 (10 sec.)	°C
Operating Temperature Range	T _J	-40 ~ 125	°C
Storage Temperature Range	T _{STG}	-60 ~ 150	°C

Electrical Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V _{RWM}	Reverse Working Voltage	Any I/O to Ground			3.3	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA, Any I/O to Ground		6.5		V
I _R	Reverse Leakage Current	V _{RWM} = 5V, Any I/O to Ground	-150			nA
V _f	Forward clamping voltage	TLP, I _{PP} = 16 A, from Pin 2 to Pin 1		6		V
		TLP, I _{PP} = 30 A, from Pin 2 to Pin 1		9		V
V _c	Clamping Voltage	TLP, I _{PP} = 16 A, from Pin 1 to Pin 2		8		V
		TLP, I _{PP} = 30 A, from Pin 1 to Pin 2		11		V
C _J	Junction Capacitance	V _R = 0 V, f = 1 MHz		0.4	0.65	pF
		V _R = 0 V, f = 1 GHz		0.4	0.65	pF

PROTECTION PRODUCTS
Typical characteristics

Fig1. 8/20 μ s Pulse Waveform

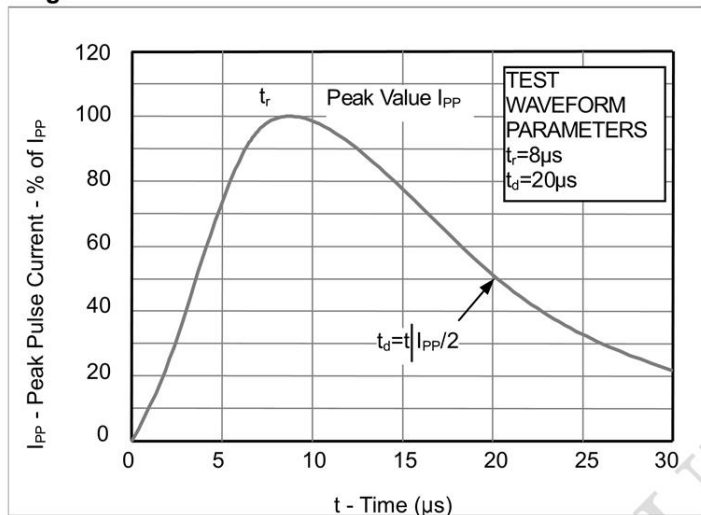


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

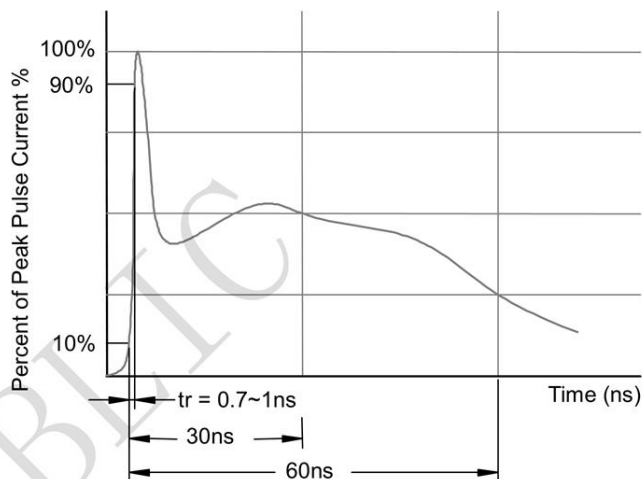
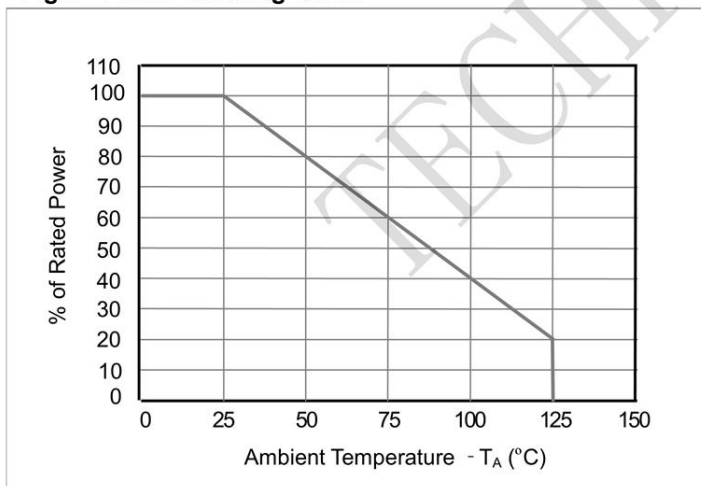
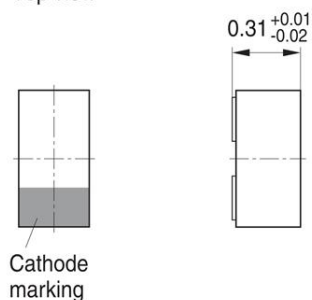


Fig3. Power Derating Curve

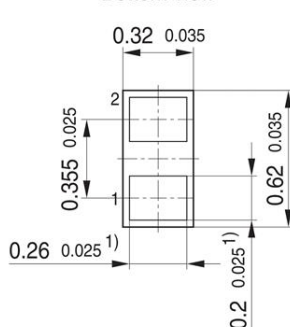


Outline Drawing -0201

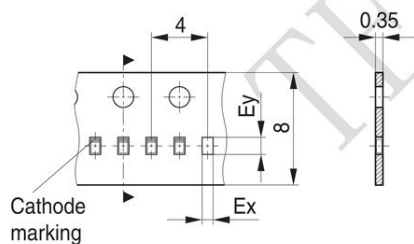
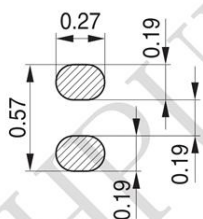
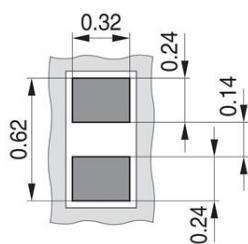
Top view



Bottom view



Land Pattern - 0201



Tape type	Ex	Ey
Punched Tape	0.43	0.73
Embossed Tape	0.37	0.67

Deliveries can be both tape types (no selection possible).
Specification allows identical processing (pick & place) by users.