



**Ultra Low Capacitance
Bidirectional TVS for ESD Protection Diode**



FEATURES

- ◆ Transient protection for high-speed data lines
- ◆ IEC 61000-4-2 (ESD) ±15kV (Air)
±8kV (Contact)
- ◆ IEC 61000-4-4 (EFT) 40A (5/50 ns)
- ◆ Cable Discharge Event (CDE)
- ◆ Package optimized for high-speed lines
- ◆ Ultra-small package (1.0mm×0.6mm×0.5mm)
- ◆ Protects one data, control line
- ◆ Low capacitance: 0.25pF (Typical)
- ◆ Low leakage current
- ◆ Low clamping voltage

APPLICATIONS

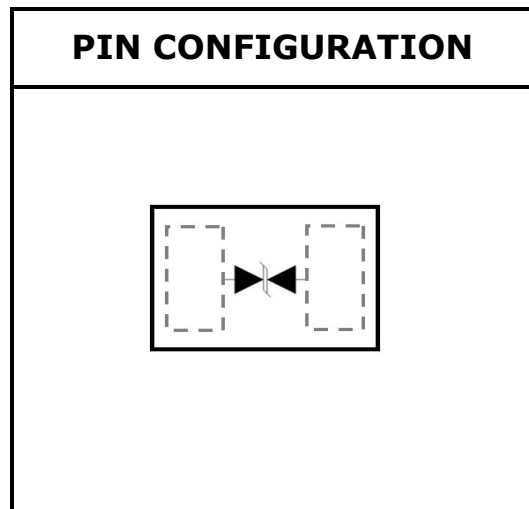
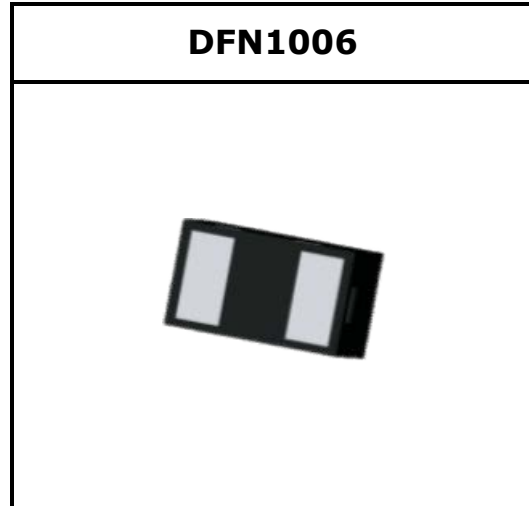
- ◆ Serial ATA
- ◆ Desktops, Servers and Notebooks
- ◆ Cellular Phones
- ◆ MDDI Ports
- ◆ USB Data Line Protection
- ◆ Display Ports
- ◆ Digital Visual Interfaces (DVI)

MECHANICAL CHARACTERISTICS

- ◆ DFN1006 package
- ◆ Flammability Rating: UL 94V-0
- ◆ Packaging: Tape and Reel
- ◆ High temperature soldering guaranteed: 260°C/10s
- ◆ Reel size: 7 inch

ORDER INFORMATION

- ◆ Device: YSESD0501CP
- ◆ Package: DFN1006
- ◆ Marking: 5BU
- ◆ Material: Halogen free
- ◆ Packing: Tape & Reel
- ◆ Quantity per reel: 10,000pcs



DEVICE CHARACTERISTICS

YSESD0501CP

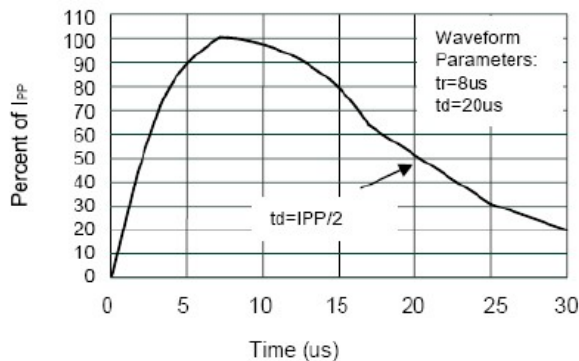
ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	± 20 ± 20	kV
P_{PP}	Peak Pulse Power (8/20 μ s)	88	W
T_{OPT}	Operating Temperature	-55~125	$^{\circ}$ C
T_{STG}	Storage Temperature	-55~150	$^{\circ}$ C

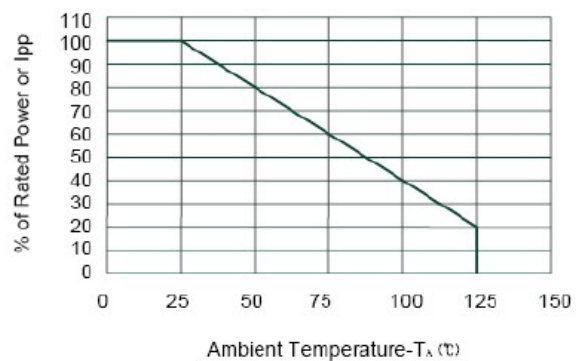
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}$ C)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				5	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1mA$			6	V
I_R	Reverse Leakage Current	$V_{RWM} = 5V$			100	nA
V_C	Clamping Voltage	$I_{PP} = 1A, t_p = 8/20\mu s$			13	V
		$I_{PP} = 4A, t_p = 8/20\mu s$			22	V
C_J	Junction Capacitance	$V_R = 0V, f = 1MHz$		0.25	0.40	pF

ELECTRICAL CHARACTERISTICS CURVE



Pulse Waveform

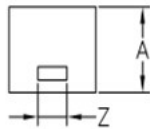
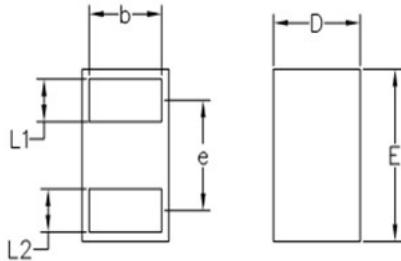


Power Derating Curve

PACKAGE OUTLINE & DIMENSIONS

YSESD0501CP

DFN1006



NOTE: ALL DIMENSIONS IN MM

	MIN	NOM	MAX
D	0.55	0.60	0.65
E	0.95	1.00	1.05
L1	0.20	0.25	0.30
L2	0.20	0.25	0.30
A	0.45	0.50	0.55
Z	0.15	0.20	0.25
b	0.45	0.50	0.55
e		0.64BSC	

