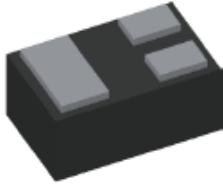


## Description

The CSL05F2U3 is a low capacitance TVS designed to protect high speed data interface. It has been specifically designed to protect sensitive electronic components which are connected to data and transmission lines from over-stress caused by ESD.



## Mechanical Characteristics

- ◆ DFN1006
- ◆ ROHS/ Compliant
- ◆ Halogen free
- ◆ Molding compound flammability rating: UL 94V-0
- ◆ Marking: Part number
- ◆ Packing: Tape and Reel per EIA 481

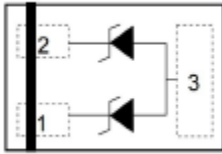
## Features

- ◆ IEC 61000-4-2 (ESD)
  - ±10kV Contact Discharge
  - ±15kV Air Discharge
- ◆ 80W Peak pulse Power (8/20us)
- ◆ Halogen free and RoHS compliant
- ◆ Transient protection for high-speed data lines
- ◆ Low clamping voltage
- ◆ Low leakage current

## Applications

- ◆ USB 2.0 and USB 3.0
- ◆ HDMI 1.3 and HDMI 1.4
- ◆ SATA and Esata
- ◆ DVI
- ◆ IEEE 1394
- ◆ PCI Express
- ◆ Notebooks

### Pin Configuration



### Ordering Information

Part Number	Package	Material	Packing	Quantity per reel	Flammability Rating	Reel Size
CSL05F2U3	DFN1006	Halogen free	Tape & Reel	10000 PCS	UL 94V-0	7 inches

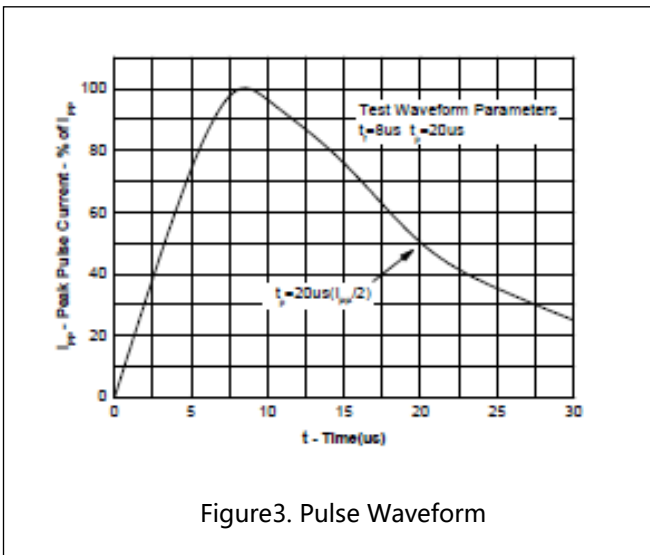
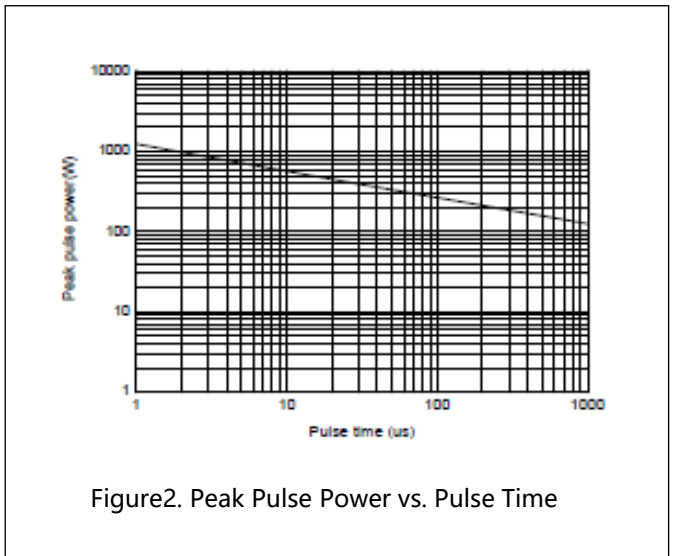
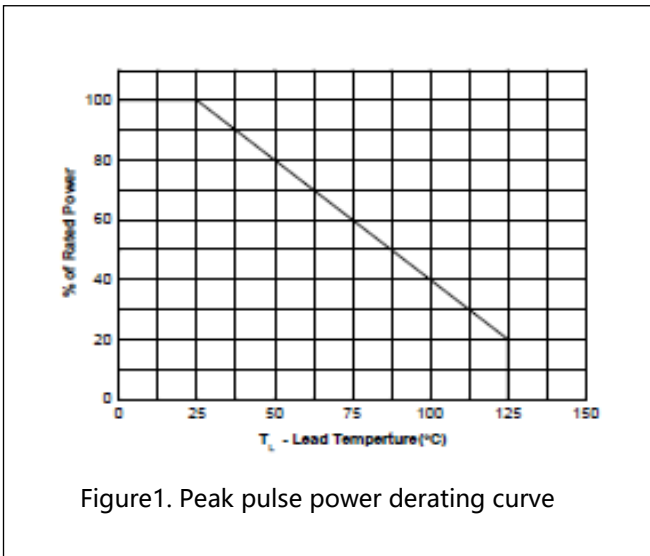
### Absolute Maximum Ratings ( $T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameters	Symbol	Rating	Unit
Peak pulse power ( $t_p = 8/20\mu\text{s}$ )	$P_{pk}$	80	W
Peak pulse current ( $t_p=8/20\mu\text{s}$ )@ $25^{\circ}\text{C}$	$I_{pp}$	4	A
ESD (IEC61000-4-2 air discharge) @ $25^{\circ}\text{C}$	$V_{ESD}$	$\pm 15$	kV
ESD (IEC61000-4-2 contact discharge) @ $25^{\circ}\text{C}$	$V_{ESD}$	$\pm 10$	kV
Junction temperature	$T_J$	125	$^{\circ}\text{C}$
Operating temperature	$T_{OP}$	-40~125	$^{\circ}\text{C}$
Storage temperature	$T_{STG}$	-55~150	$^{\circ}\text{C}$
Lead temperature	$T_L$	260	$^{\circ}\text{C}$

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	$V_{RWM}$				5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_t=1\text{mA}$	6.0		9.0	V
Reverse Leakage Current	$I_R$	$V_{RWM}=5\text{V}$			100	nA
Clamping Voltage	$V_C$	$I_{PP}=1\text{A}$ $t_p=8/20\mu\text{s}$		10		V
Clamping Voltage	$V_C$	$I_{PP}=4\text{A}$ $t_p=8/20\mu\text{s}$		15	25	V
Junction Capacitance	$C_J$	$V_R=0\text{V}$ , $f = 1\text{MHz}$		0.6		pF

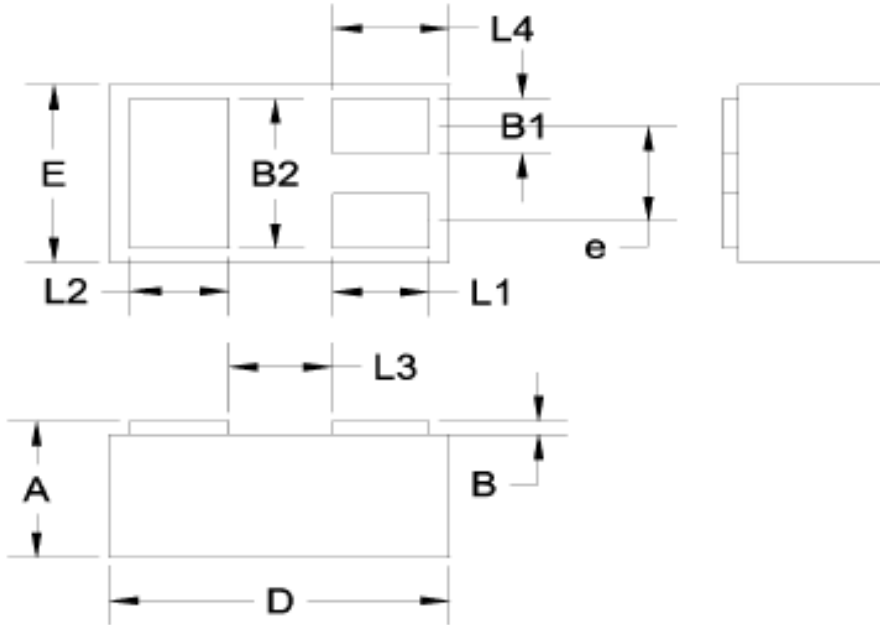
Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)



Applications Information

Typical Interface Application

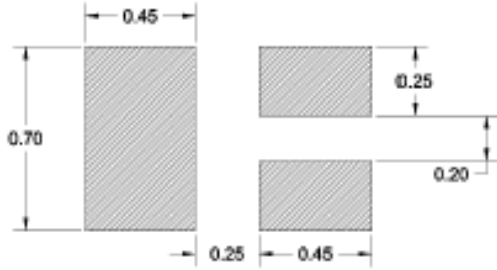
Package Outline Drawing



Units in millimeters

SYMBOL	MIN	NOM	MAX
A	0.40	0.45	0.50
B	0.00	0.02	0.05
B1	0.10	0.15	0.20
B2	0.45	0.50	0.55
D	0.90	1.00	1.05
E	0.50	0.60	0.65
e	0.35 BSC		
L1	0.20	0.25	0.30
L2	0.20	0.25	0.30
L3	0.39 BSC		
L4	0.25	0.30	0.35

Recommended Land Pattern



Note:

1. Controlling dimension: in millimeters
2. General tolerance:  $\pm 0.05\text{mm}$
3. The pad layout is for reference only

Revision history of Specification

Version	Change Items	Effective Date
1.0	Initial Release	13-Aug-2021