

Description

The CSL05Y4U series transient voltage suppressor arrays, designed to protect applications such as computers, printers, business machines, communication system and other applications. This series is rated at 60 Watts for an 8/20 μ s waveform. This series offers low leakage current in a SOT-553 package.



Features

- ◆ 60 Watts peak pulse power (tp=8/20 μ s)
- ◆ Low leakage current
- ◆ Low clamping voltage
- ◆ Protect two bi-directional lines or four uni-directional lines
- ◆ RoHS compliant

Mechanical Data

- ◆ Personal digital assistants (PDA's)
- ◆ Microprocessors based equipment
- ◆ Notebooks, desktops, and servers
- ◆ Cell phone handsets and accessories
- ◆ Portable electronics
- ◆ Peripherals

Ordering Information

Part Number	Package	Marking	Material	Packing	Quantity per reel	Flammability Rating	Reel Size
CSL05Y4U	SOT-553	.L2W	Halogen free	Tape & Reel	3,000 PCS	UL 94V-0	7 inches

Table-1 Ordering information

Pin Configuration and Functions

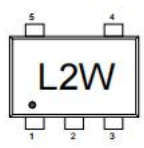
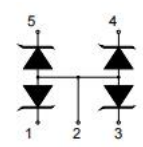
Pin	Name	Description	Outline	Circuit Diagram
1	IO1	Connect to IO		
2	GND	Connect to GND		
3	IO2	Connect to IO		
4	IO3	Connect to IO		
5	IO4	Connect to IO		

Table-2 Pin configuration

Absolute Maximum Rating

Over operating free-air temperature range (unless otherwise noted)

Parameters	Symbol	Min.	Max.	Unit
Peak pulse power (tp=8/20us)@25°C	P_{pk}	-	60	W
Peak pulse current (tp=8/20us)@25°C	I_{pp}	-	4.5	A
ESD (IEC61000-4-2 air discharge) @25°C	V_{ESD}	-	±17	kV
ESD (IEC61000-4-2 contact discharge) @25°C	V_{ESD}	-	±12	kV
Junction temperature	T_J	-	125	°C
Operating temperature	T_{OP}	-40	125	°C
Storage temperature	T_{STG}	-55	150	°C
Lead temperature	T_L	-	260	°C

Table-3 Absolute Maximum rating

Electrical Characteristics

At Ta = 25°C unless otherwise noted

Parameters	Symbol	conditions	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	6			V
Reverse Leakage Current	I_R	$V_{RWM} = 24V$			1	uA
Clamping Voltage	V_{CL}	$I_{pp} = 1A; TP = 8/20us$		8.5		V
		$I_{pp} = 4.5A; TP = 8/20us$		12		
Junction capacitance	C_J	I/O to GND; $V_R = 0V; f = 1MHz$		0.6		pF
		I/O to I/O; $V_R = 0V; f = 1MHz$		0.3		pF

Table-4 Electrical Characteristics



Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Figure 1. ESD clamping

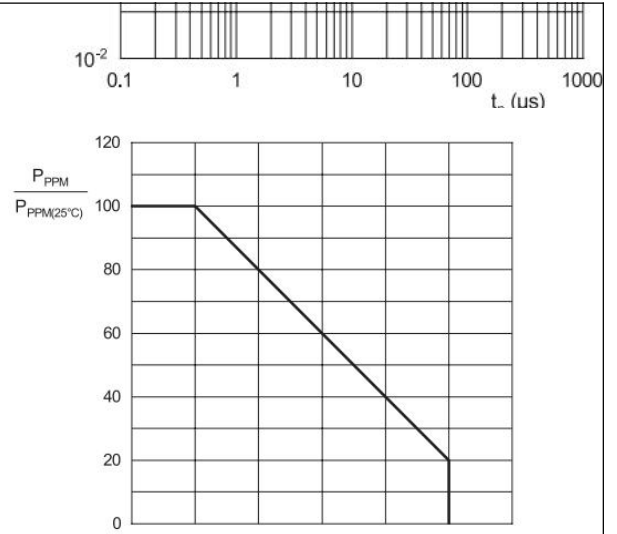
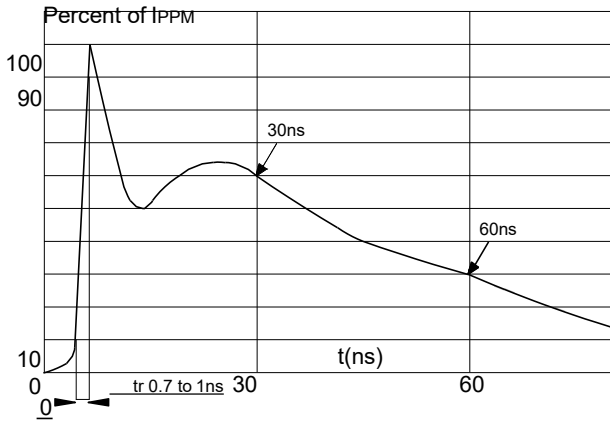


Figure 3 8/20us Pulse Waveform

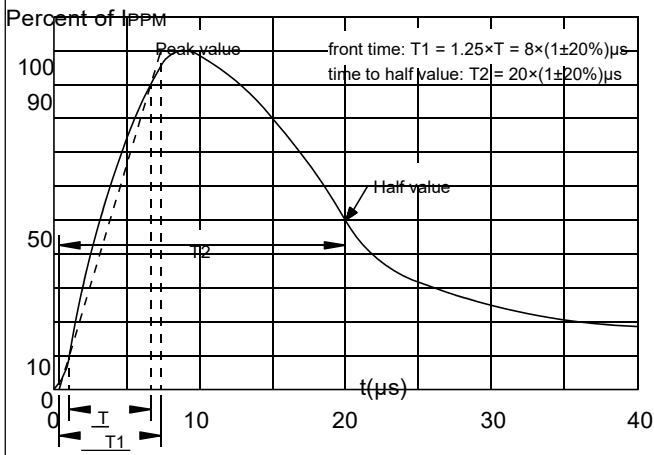
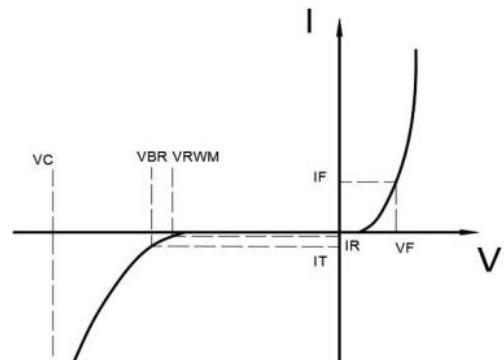
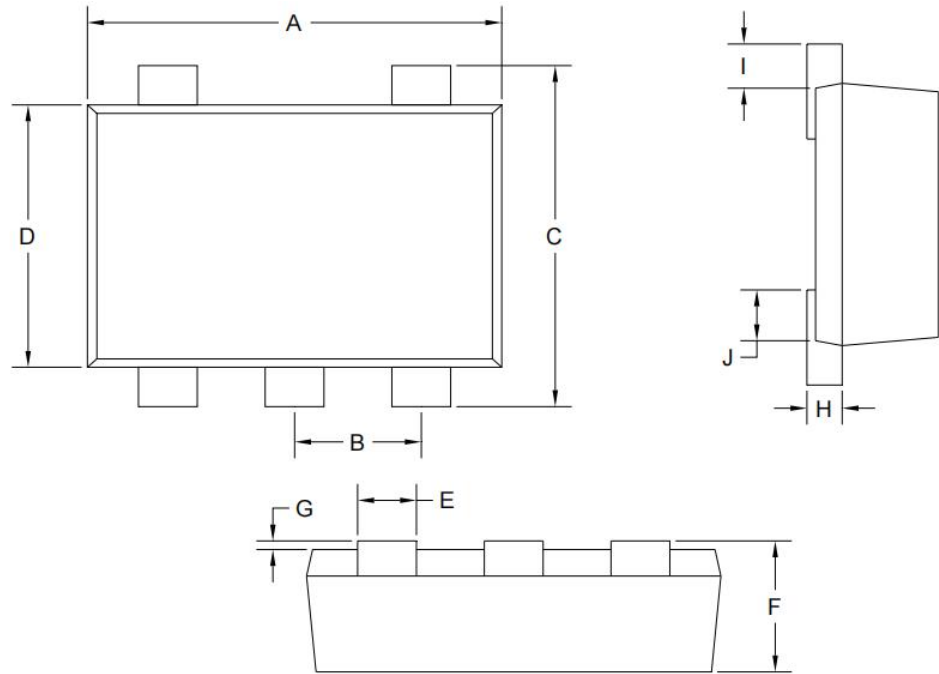


Figure 4 I-V curve



Dimension

Units in millimeters

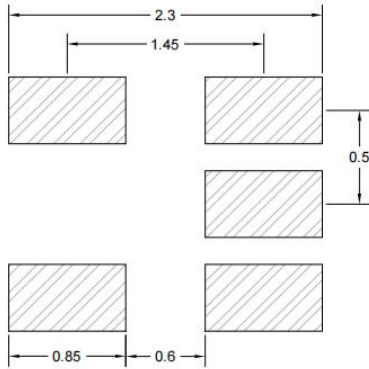


symbol	A	B	C	D	E	F	G	H	I	J
Min.	1.50	0.50	1.55	1.10	0.15	0.50	0.00	0.10	0.10	0.15
Max.	1.70	0.60	1.70	1.25	0.30	0.60	0.05	0.18	0.30	0.20

Table-5 product dimensions



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	23-Dec-2021

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