SEMICONDUCTOR

DATA SHEET

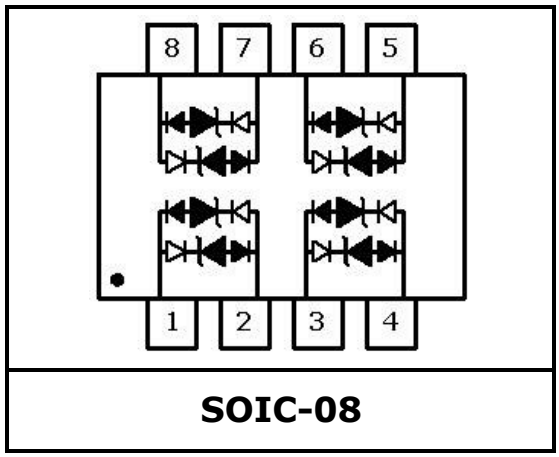
YSLVU2.8-8

Low Voltage TVS Diode Array For ESD and Latch-Up Protection

The YSLVU2.8-8 of transient voltage suppressors are designed to protect low voltage state-of-the-art CMOS semiconductors from transients caused by electrostatic (ESD), cable discharge events (CDE), lightning and other induced voltage surges.
The device provides low standoff voltages with significant reductions in leakage currents and capacitance over silicon avalanche diode processes.
The YSLVU2.8-8 features integrated low capacitance compensation diodes that reduce the typical capacitance 5pF per line.
This combined with low leakage current, means signal integrity preserved in high-speed applications such as 10/100/1000 Ethernet.

SPECIFICATION FEATURES

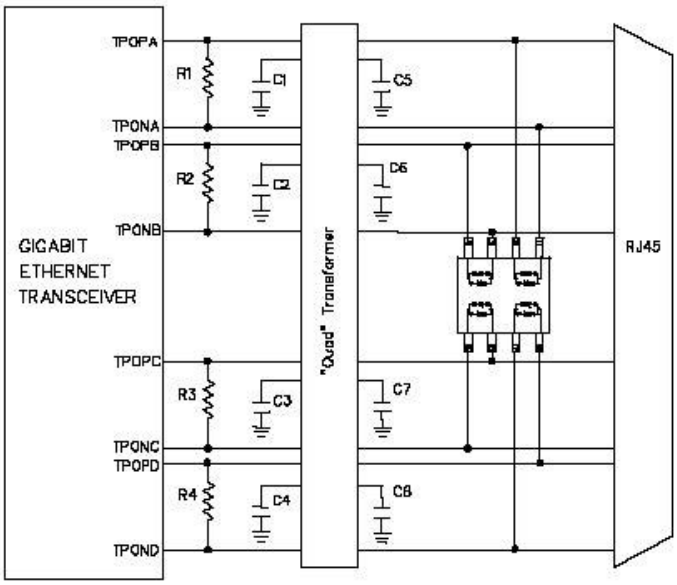
- IEC61000-4-2 ESD 15kV Air, 8kV contact compliance
- SOIC-08 surface mount package
- Protects four lines pairs (eight lines)
- Peak power dissipation of 600W under 8/20μs waveform
- Working voltage : 2.8V
- Low leakage current
- Low operating and clamping voltages
- Sold-state silicon avalanche technology
- Lead Free/ RoHS Compliant



SOIC-08

APPLICATIONS

- 10/100/1000 Ethernet
- WAN/LAN Equipment
- High Current Switching Systems
- Desktops, Servers, and Notebook
- Instrumentation
- Analog Inputs
- Base Stations



DEVICE CHARACTERISTICS

YSLVU2.8-8

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P_{PP}	600	W
ESD Voltage (HBM Contact)	V_{ESD}	±8	kV
ESD Voltage (AIR Contact)		±15	
Storage & Operating Temperature Range	T_{STG}, T_J	-55~+150	℃

ELECTRICAL CHARACTERISTICS (T_J=25℃)

YSLVU2.8-8 (Marking : SLVU2.8-8)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	V_{WRM}				2.8	V
Reverse Breakdown Voltage	V_{BR}	I_{BR}=1mA	3			V
Reverse SnapBack Voltage	V_{SB}	I_{SB}=50mA	2.8			V
Reverse Leakage Current	I_R	V_R=2.8V			1	μA
Clamping Voltage (tp=8/20μs)	V_C	I_{PP}=2A			5.5	V
Clamping Voltage (tp=8/20μs)	V_C	I_{PP}=5A			8.5	V
Clamping Voltage (tp=8/20μs)	V_C	I_{PP}=24A			15	V
Clamping Voltage (tp=8/20μs)	V_C	I_{PP}=27A			17	V
Maximum Peak Pulse Current (tp=8/20μs)	I_{PP}	tp=8/20μs			30	A
Off State Junction Capacitance	C_J	0Vdc, f=1MHZ between I/O pins and GND		5		pF

TYPICAL CHARACTERISTICS CURVES

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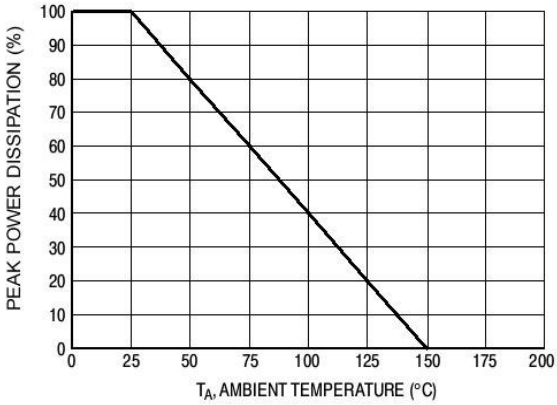


Figure 1. Power Derating Curve

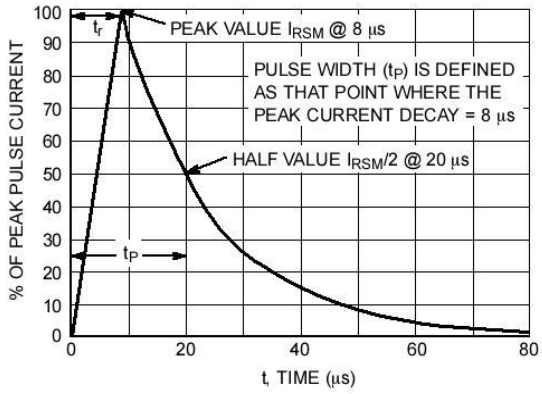


Figure 2. 8/20 μs Pulse Waveform

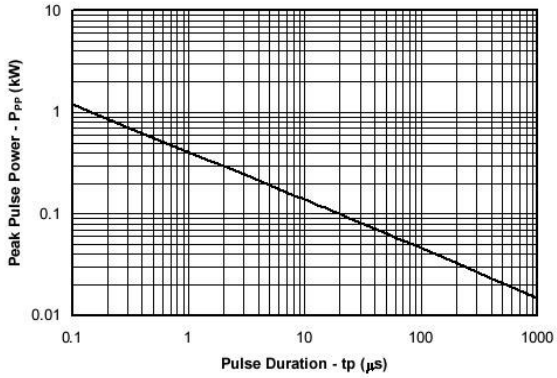


Figure 3. Non-Repetitive Peak Pulse vs. Pulse Time

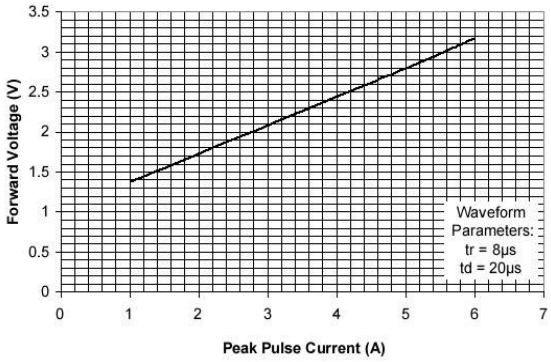


Figure 4. Forward Voltage vs. Forward Current

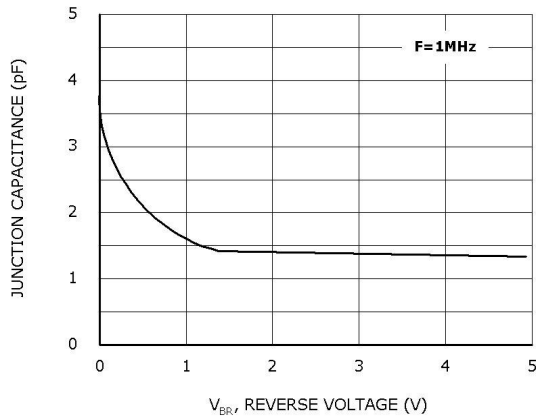


Figure 5. Capacitance vs. Reverse Voltage

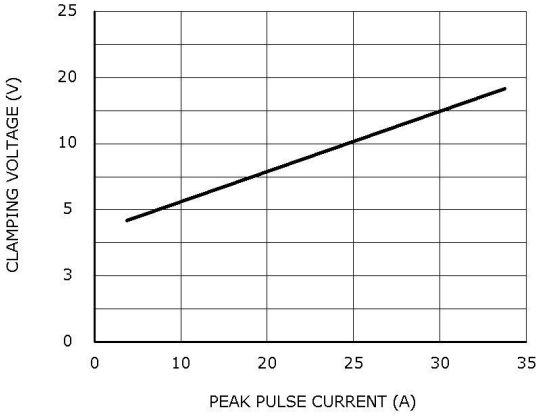


Figure 6. Clamping Voltage vs. Peak Pulse Current

PACKAGE OUTLINE & DIMENSIONS

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