

ULTRA LOW CAPACITANCE QUAD TVS ARRAY FOR HIGH SPEED TRANSMISSION DATA LINES

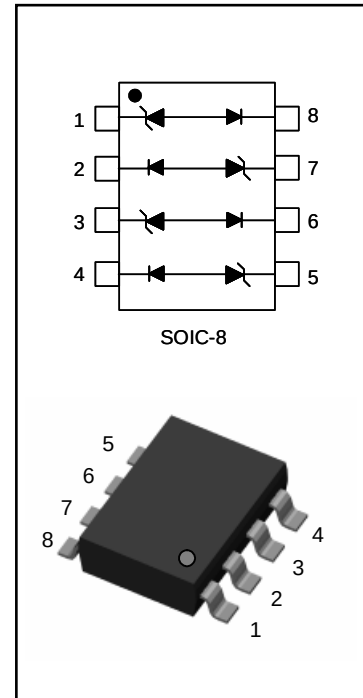
This Transient Voltage Suppressor Array is intended to Protect Sensitive Equipment against Electrostatic Discharge and Transient Events as well to offer a minimum insertion loss in high speed data communication transmission line ports used in Portable Consumer, Computing and Networking Applications.

SPECIFICATION FEATURES

- Working Peak Reverse Voltage Range of 5, 12, 15 and 24V
- Maximum Leakage Current of 5 μ A
- IEC61000-4-2 Compliance 15kV Air, 8kV Contact Discharge
- Maximum Off-State Capacitance of 1.2pF at 1MHz 0Vdc

APPLICATIONS

- Handheld Computers (PDA)
- Universal Serial Bus (1.1 and 2.0) and Fire Wire Ports
- Portable Instrumentation
- Laptop or Desktop Computer Network cards
- Ethernet 10, 100, and 1000 Base Port Protection



MAXIMUM RATINGS

Rating	Symbol	Value	Units
Peak Pulse Power 8/20 μ s Waveform	P _{pp}	400	W
ESD Voltage (HBM)	V _{ESD}	25	kV
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C
Lead Soldering Temperature (max 10 s)	T _L	260	°C

ELECTRICAL CHARACTERISTICS (Per Device Pair) T_j = 25°C

PJLCDA05

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V _{WRM}				5	V
Reverse Breakdown Voltage	V _{BR}	I _{BR} = 1mA	6			V
Reverse Leakage Current	I _R	V _R = 5V			5	μ A
Clamping Voltage (8/20 μ s)	V _c	I _{pp} = 1 Amps			9.5	V
Clamping Voltage (820 μ s)	V _c	I _{pp} = 5 Amps			12	V
Maximum Peak Pulse Current	I _{pp}	8/20 μ s Waveform			17	A
Off State Junction Capacitance	C _j	0 Vdc Bias f = 1MHz Between pins 1-8, 2-7, 3-6 and 4-5			1.2	pF

ELECTRICAL CHARACTERISTICS (Per Device Pair) T_j = 25°C
PJLCDA12

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V _{WRM}				12	V
Reverse Breakdown Voltage	V _{BR}	I _{BR} = 1mA	13.3			V
Reverse Leakage Current	I _R	V _R = 12V			1	μA
Clamping Voltage (8/20μs)	V _c	I _{pp} = 1A			19	V
Clamping Voltage (8/20μs)	V _c	I _{pp} = 5A			24	V
Maximum Peak Pulse Current	I _{pp}	8/20 μs Waveform			12	A
Off State Junction Capacitance	C _j	0 Vdc Bias f = 1MHz Between pins 1-8, 2-7,3-6 and 4-5			1.2	pF

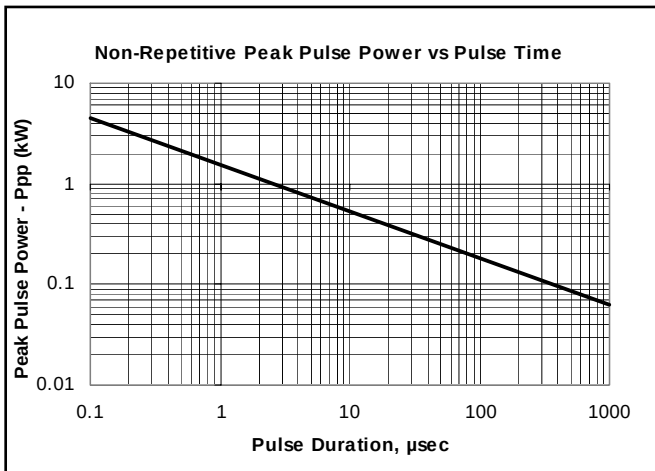
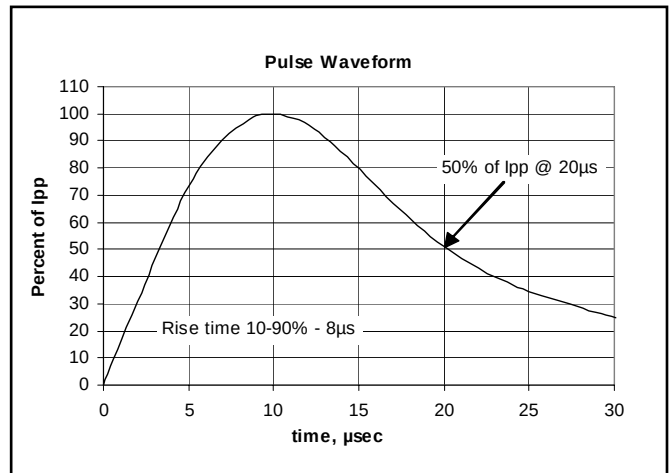
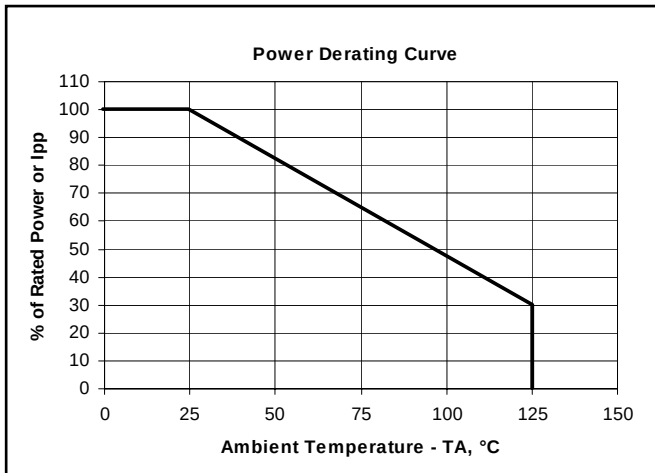
PJLCDA15

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V _{WRM}				15	V
Reverse Breakdown Voltage	V _{BR}	I _{BR} = 1 mA	16.7			V
Reverse Leakage Current	I _R	V _R = 15V			1	μA
Clamping Voltage (8/20μs)	V _c	I _{pp} = 1A			24	V
Clamping Voltage (8/20μs)	V _c	I _{pp} = 5A			30	V
Maximum Peak Pulse Current	I _{pp}	8/20 μs Waveform			10	A
Off State Junction Capacitance	C _j	0 Vdc Bias f = 1MHz Between pins 1-8, 2-7,3-6 and 4-5			1.2	pF

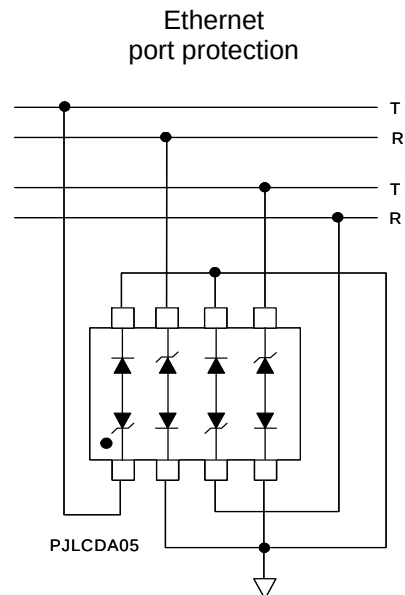
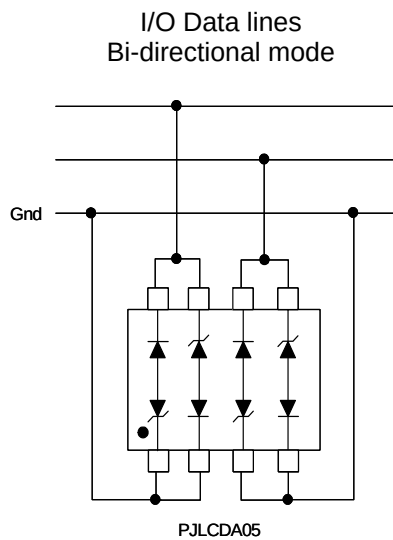
PJLCDA24

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V _{WRM}				24	V
Reverse Breakdown Voltage	V _{BR}	I _{BR} = 1mA	26.7			V
Reverse Leakage Current	I _R	V _R = 24V			1	μA
Clamping Voltage (8/20μs)	V _c	I _{pp} = 1A			43	V
Clamping Voltage (8/20μs)	V _c	I _{pp} = 5A			55	V
Maximum Peak Pulse Current	I _{pp}	8/20 μs Waveform			7	A
Off State Junction Capacitance	C _j	0 Vdc Bias f = 1MHz Between pins 1-8, 2-7,3-6 and 4-5			1.2	pF

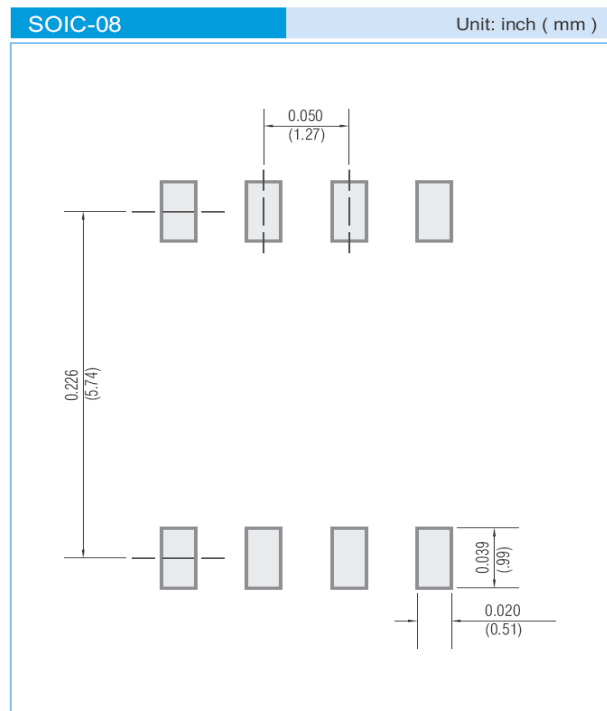
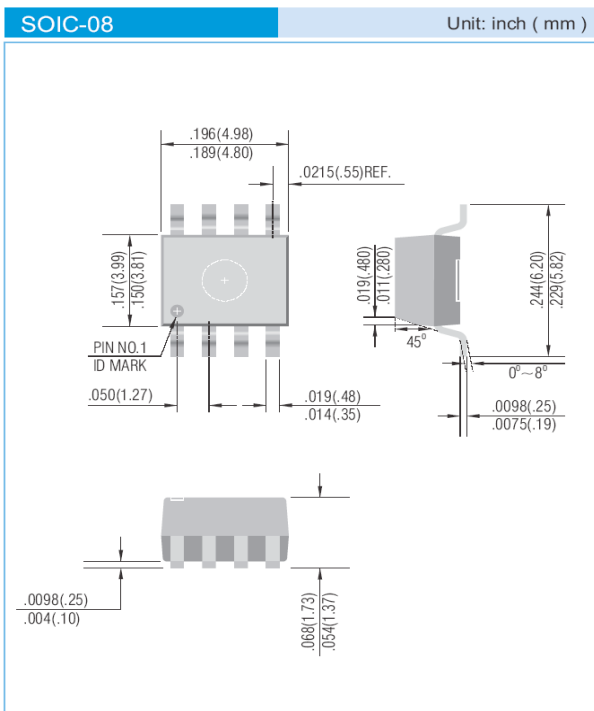
TYPICAL CHARACTERISTIC CURVES



TYPICAL APPLICATION CONFIGURATIONS



PACKAGE DIMENSIONS AND PAD LAYOUT



PRODUCT MARKING INFORMATION

TVS	Marking Code
PJLCDA05	L05
PJLCDA12	L12
PJLCDA15	L15
PJLCDA24	L24

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