

Low Capacitance TVS Diode Array

Primary characteristics			
Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (contact)	V_{ESD}	± 8	kV
ESD per IEC 61000-4-2 (air)	V_{ESD}	± 15	kV
Peak pulse power (8/20 μ s)	P_{PP}	300	W

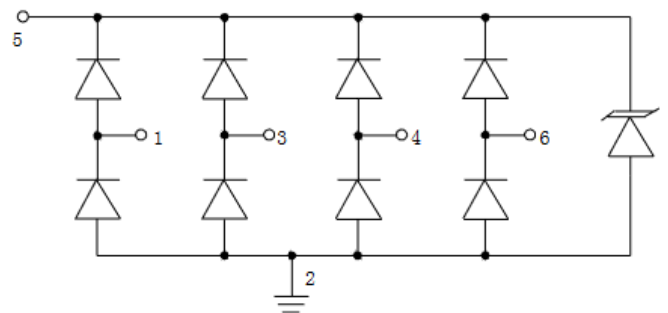
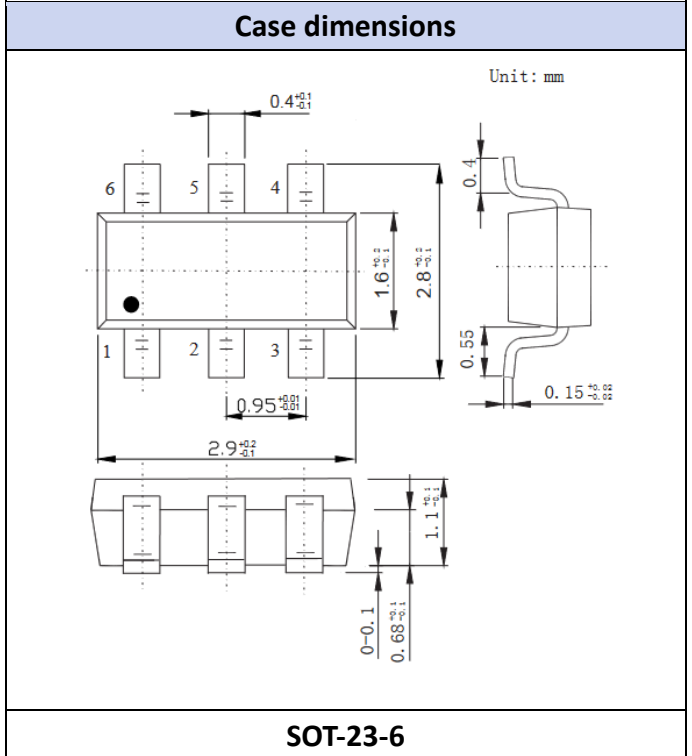
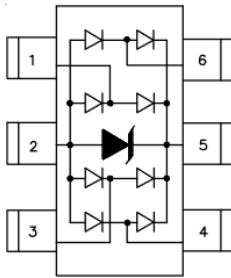
Features

- **SOT-23-6** case for easy automatic insertion.
- Pb-free and **RoHS** compliant
- ESD protection for high-speed data lines
- Low clamping voltage
- Protects 4 I/O lines

Applications

- Video interface protection
- USB ESD protection
- DVI protection
- 10/100 ethernet protection
- Gigabit ethernet protection
- Please contact Akyga Semi for more application information (like circuit examples)

Pin configuration

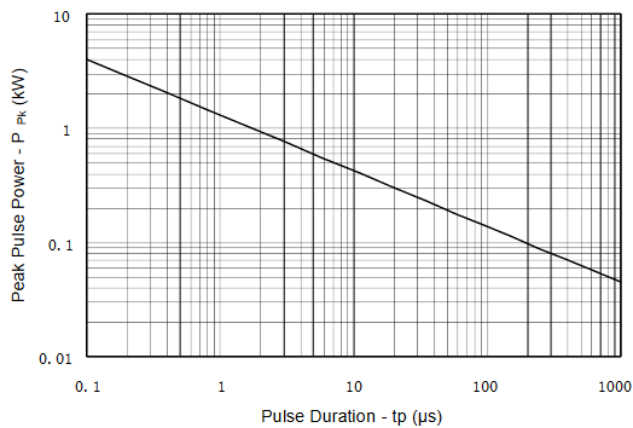
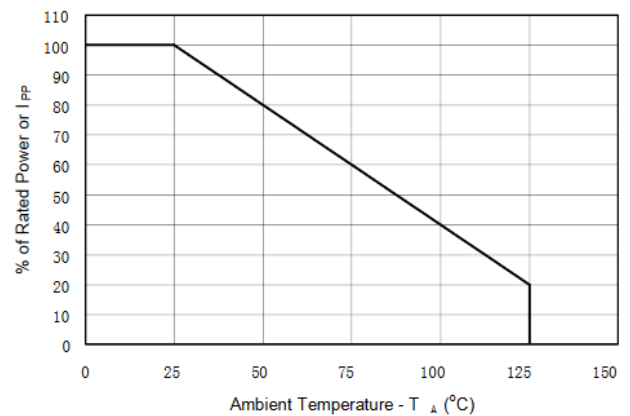
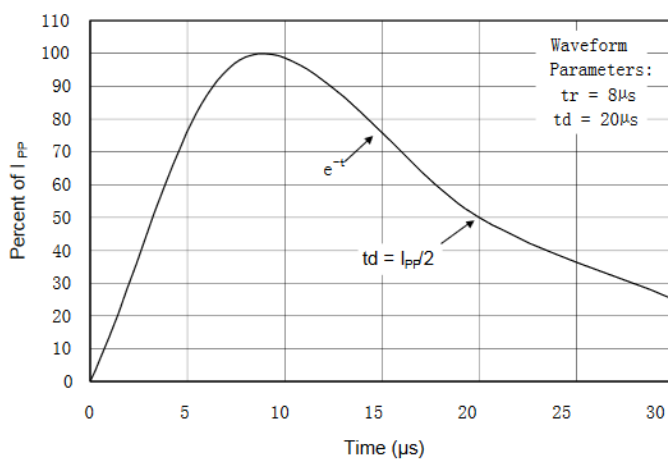
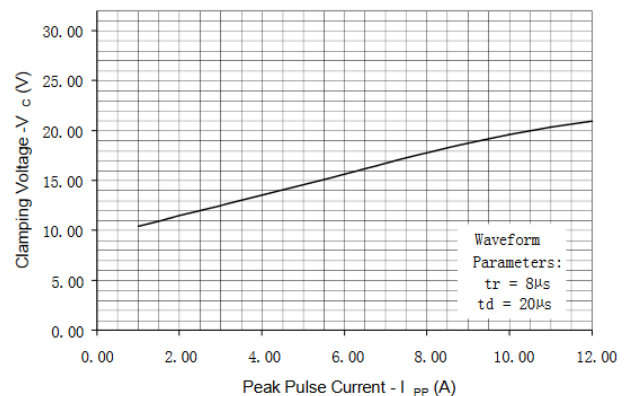


Maximum ratings and electrical characteristics ($T_a = 25^\circ\text{C}$)

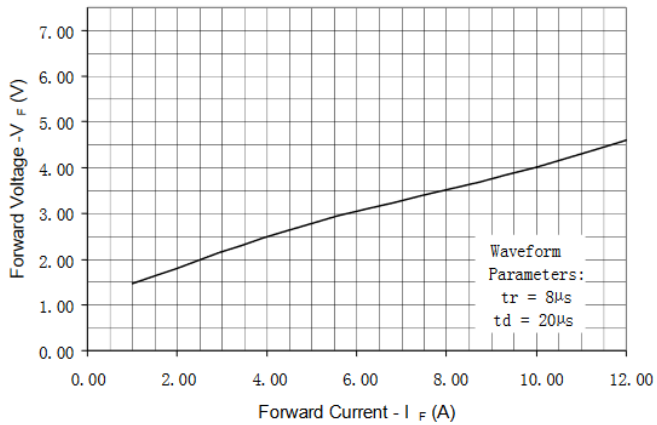
Characteristics	Test condition	Symbol	Value			Unit
			Min.	Typ.	Max.	
ESD per IEC 61000-4-2	Contact	V_{ESD}	-	-	8.0	kV
ESD per IEC 61000-4-2	Air		-	-	15	
Peak pulse power	$t_p=8/20\mu\text{s}$	P_{PP}	-	-	300	W
Peak pulse current	$t_p=8/20\mu\text{s}$	I_{PP}	-	-	12	A
Operating temperature	-	T_{OPT}	-55	-	150	$^\circ\text{C}$
Storage temperature	-	T_{STG}	-55	-	150	$^\circ\text{C}$

Maximum ratings and electrical characteristics (T_a = 25°C)

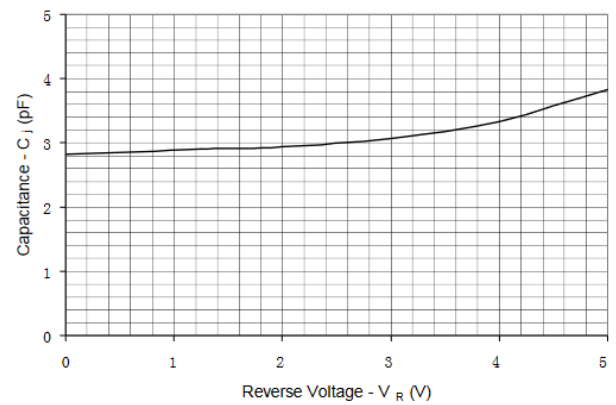
Characteristics	Test condition	Symbol	Value			Unit
			Min.	Typ.	Max.	
Lead solder temperature	Maximum (10 second duration)	T _L			260	°C
Reverse stand-off voltage	Pin 5 to 2	V _{RWM}			5.0	V
Reverse breakdown voltage	I _T =1.0mA	V _{BR}	6.0	-	-	V
Reverse leakage current	V _{RWM} =5.0V, Pin 5 to 2	I _R	-	-	5.0	μA
Forward voltage	I _F =15mA	V _F	-	-	1.2	V
Clamping voltage	I _{PP} =1.0A, t _p =8/20μs	V _C	-	-	12.5	V
	I _{PP} =5.0A, t _p =8/20μs		-	-	17.5	V
Junction capacitance	V _R =0V, f=1.0MHz Any I/O pin to ground	C _J	-	3.0	5.0	pF
	V _R =0V, f=1.0MHz Between I/O pins		-	1.5	-	

Peak pulse power

% of rated power or I_{PP} vs. ambient temperature

Pulse waveform

Clamping voltage vs. peak pulse current


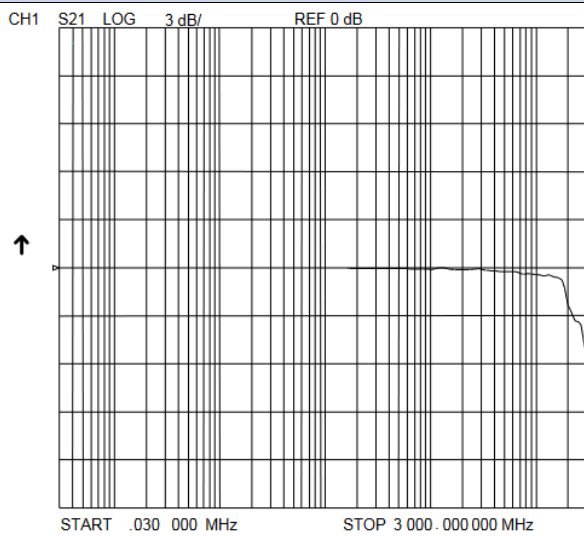
Forward voltage vs. forward current



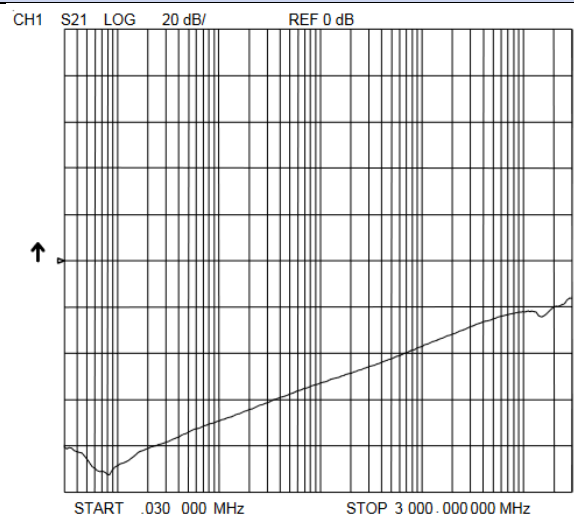
Capacitance vs. reverse voltage

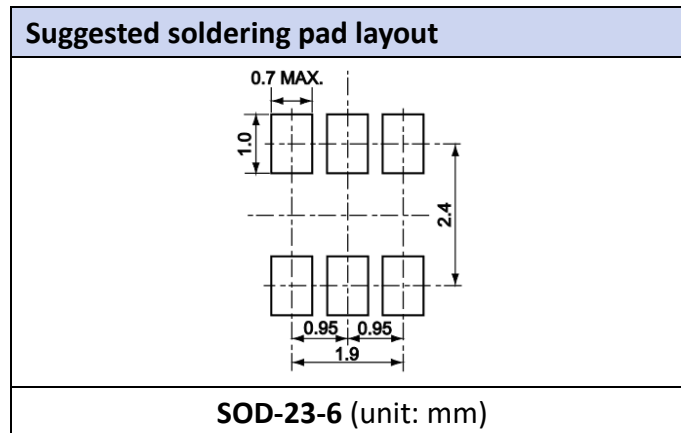


Insertion loss S21



Analog cross talk





Ordering information			
Part Number	Package	Shipping Quantity	Industry standard
SRV05-4	SOT-23-6	3 000 pcs / 7" reel	EIA-481-1

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