SRV05-4

4-Line SMD Low Capacitance Integrated ESD Protection array- 5.0V

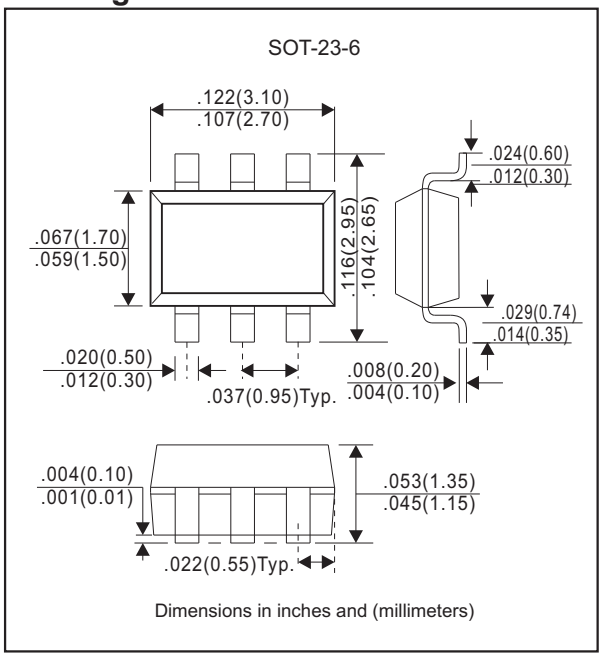
Features

- low clamping voltage
- Low leakage current
- Small package
- Low Voltage Clamping Due To Integrated Zener Diode
- Four Ultra-Low Input Capacitance (1 pF typ.) ESD Rail-to-Rail Protection Diodes
- Lead-free parts meet RoHS requirments.
- Suffix "-H" indicates Halogen-free parts, ex. SRV05-4-H.

Applications

- Digital Cameras
- Portable Instrumentation
- Notebooks, Desktops, and Serves
- Personal Digital Assistants (PDAs)
- Cell phone handsets and accessories

Package outline



Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, SOT-23-6
- Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
- Mounting Position : Any
- Weight : Approximated 0.013 gram

Fig. 1A

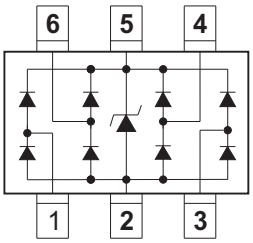
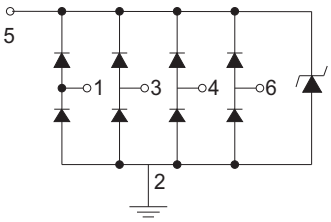


Fig. 1B



Maximum ratings (at T_A=25°C unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Peak pulse power(8/20us)	P_{PP}	100	W
Peak pulse current IEC 61000-4-5(8/20us)	I_{PP}	5	A
ESD per IEC 61000-4-2(air) ESD per IEC 61000-4-2(contact)	V_{ESD}	±25 ±25	kV
Operating junction temperature range	T_{opr}	-55 to +125	°C
Storage temperature range	T_{stg}	-55 to +150	°C

Electrical characteristics (at T_A=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse working voltage	any I/O pin to GND	V_{RWM}			5.0	V
Reverse breakdown voltage	I_T = 1mA, any I/O pin to GND	V_{BR}	6.0			V
Reverse leakage current	V_{RWM}=5V,any I/O pin to GND	I_R			1.0	uA
Clamping voltage	I_{PP}=1A, tp=8/20us I/O pin to GND	V_{C1}			11	V
	I_{PP}=1A, tp=8/20us I/O pin to GND	V_{C2}			15	V
Junction capacitance Between channel	V_R=0V, f=1MHz,between I/O pins	C_{J1}		0.35	0.45	pF
Junction capacitance Between I/O and GND	V_R=0V, f=1MHz,any I/O pin to GND	C_{J2}			0.9	pF

Rating and characteristic curves (SRV05-4)

Figure 1: Peak Pulse Power Vs Pulse Time

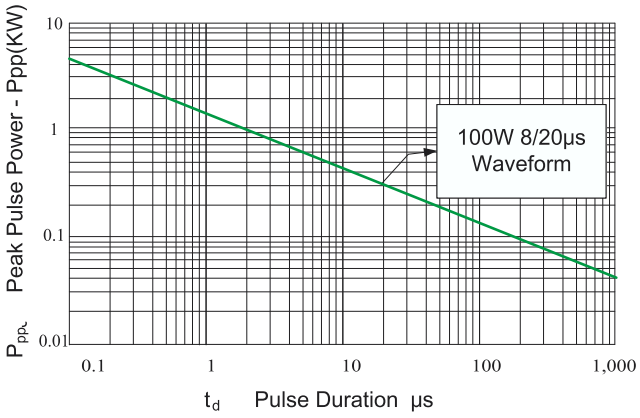


Figure 2: Power Derating Curve

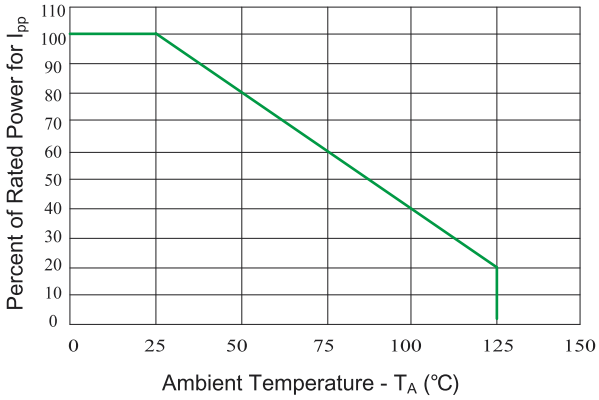


Figure 3: Clamping Voltage vs. Peak Pulse Current

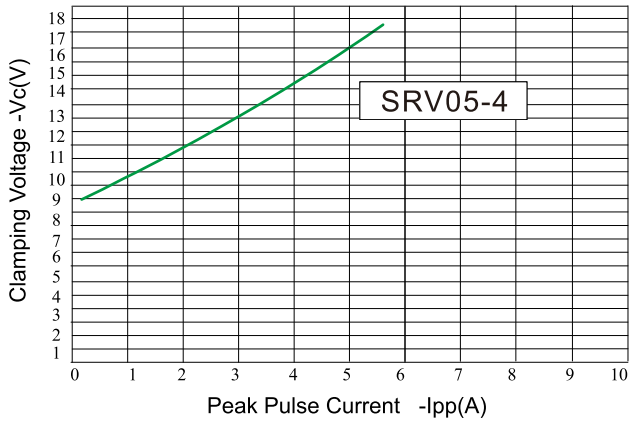


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

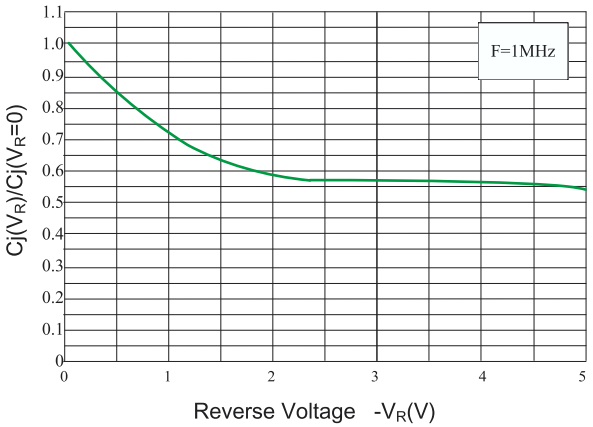


Figure 5: Pulse Waveform

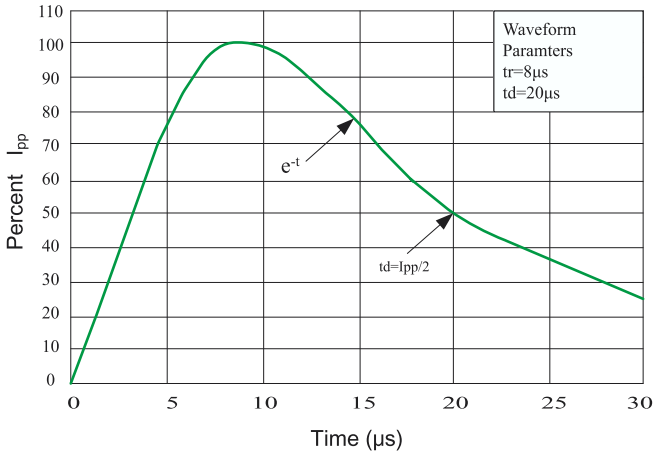


Figure 6: ESD Clamping(8kV Contact per IEC 61000-4-2)