PRTR5V0U4D

Features

- Uni-directional ESD protection of four lines
- 60W Peak pulse Power (8/20us)
- Working voltage: 5V
- Junction Capacitance: 0.3pF(Typ) I/O to I/O
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 ±12kV contact ±17kV air
- IEC 61000-4-5 (Lightning) 4.5A (8/20μs)

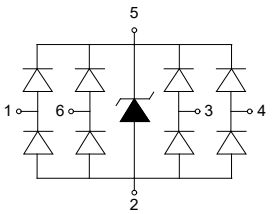
Applications

- USB 2.0
- Monitors and flat panel displays
- 10/100/1000 ethernet
- Notebook computers
- SIM ports
- ATM interface

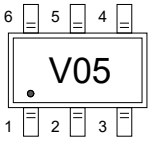
Mechanical Data

- Package:SOT-23-6L
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	Packing	Reel Size
PRTR5V0U4D	SOT-23-6L		3000 Tape & Reel	7 inches

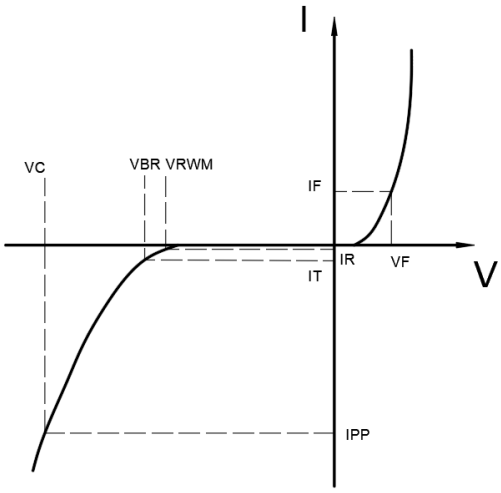
Absolute Maximum Rating(T_A=25°C unless otherwise Specified)

Parameters	Symbol	Min.	Max.	Unit
Peak pulse power (tp=8/20us)@25℃	Ppk	-	60	W
Peak pulse current (tp=8/20us)@25℃	IPP		4.5	A
ESD (IEC61000-4-2 air discharge) @25℃	VESD	-	Ñ17	kV
ESD (IEC61000-4-2 contact discharge) @25℃	VESD	-	Ñ12	kV
Junction temperature	TJ	-	150	℃
Operating temperature	TOP	-40	125	℃
Storage temperature	TSTG	-55	150	℃
Lead temperature	TL	-	260	℃

Electrical Characteristics(T_A=25°C unless otherwise Specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	IT = 1mA	6			V
Reverse Leakage Current	I_R	VRWM = 5V			1	uA
Holding Voltage	V_C	IPP=1A; tp=8/20us		9	11	V
Clamping Voltage	V_C	IPP=4.5A;tp=8/20us		12	15	V
Junction Capacitance	C_J	I/O to GND; VR=0V; f=1MHz		0.6	1.0	pF
Junction Capacitance	C_J	I/O to I/O; VR=0V; f=1MHz		0.3	0.5	pF

Symbol	Parameters
VRWM	Peak Reverse Working Voltage
IR	Reverse Leakage Current @ VRWM
VBR	Breakdown Voltage @ IT
IT	Test Current
IPP	Maximum Reverse Peak Pulse Current
VC	Clamping Voltage @ IPP
IF	Forward Current
VF	Forward Voltage @ IF



Typical Characteristics(T_A=25°C unless otherwise Specified)

Figure1: Clamping Voltage vs. Peak Pulse Current

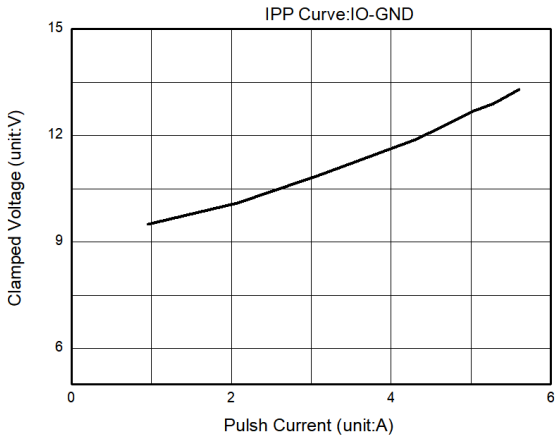


Figure2: 8 X 20us Pulse Waveform

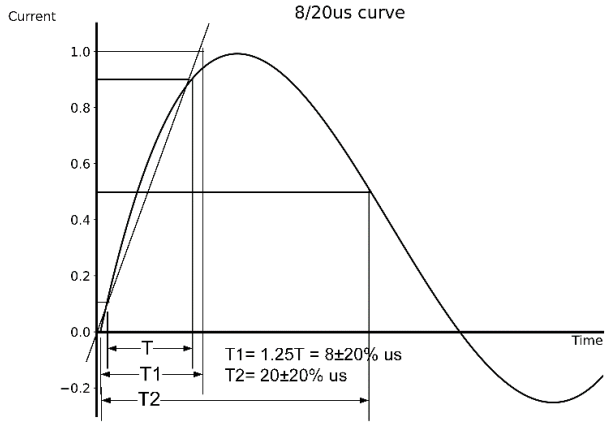


Figure3: Junction Capacitanee vs, Reverse Voltage

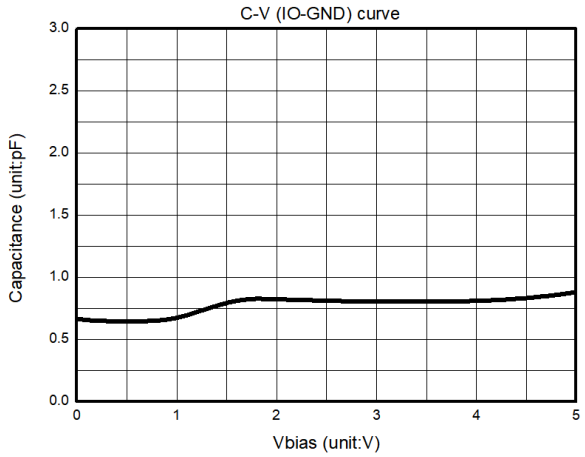


Figure4: Junction Capacitanee vs, Reverse Voltage

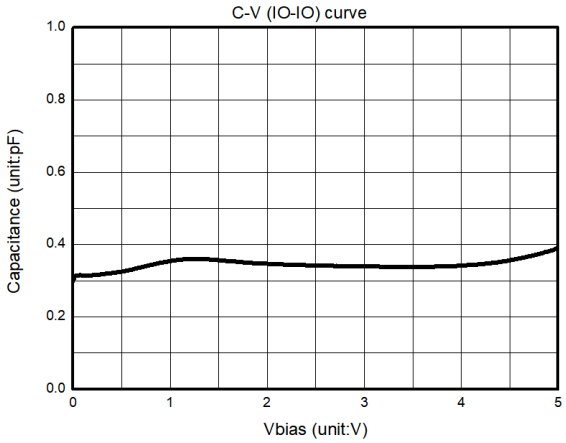


Figure5: Power derating vs. Ambient temperature

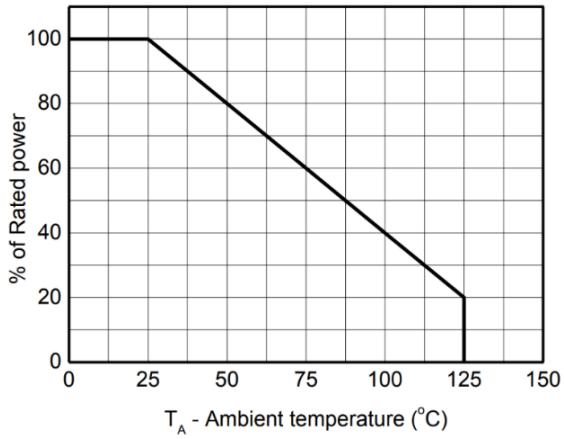
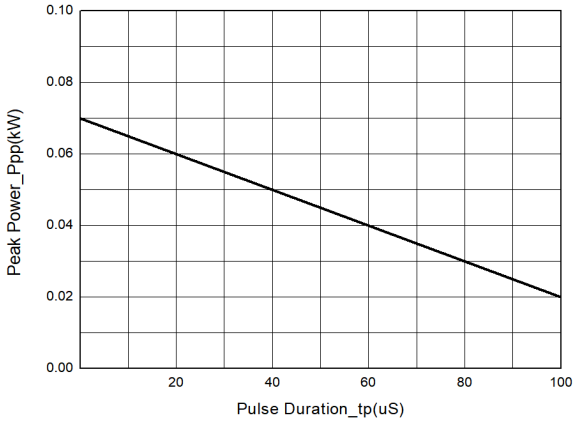
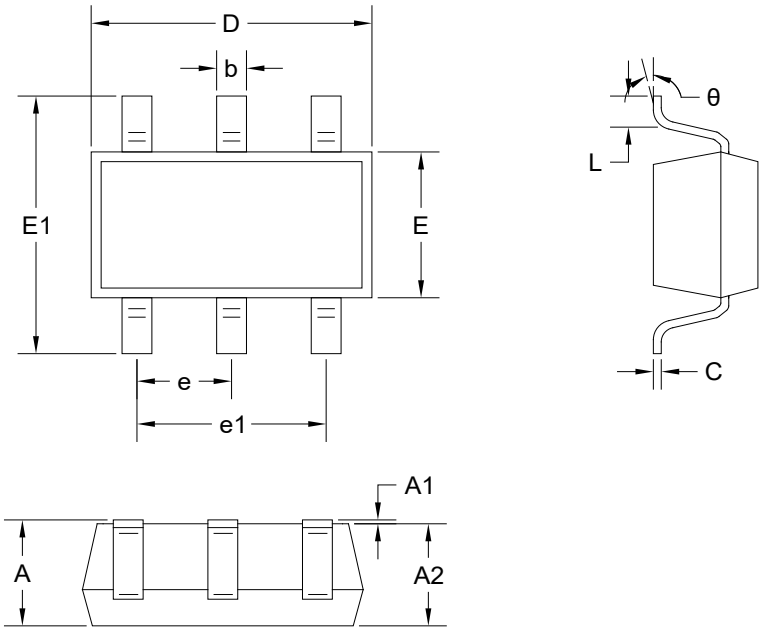


Figure6: Peak Pulse Power vs, Pulse Time



Outline Drawing – SOT-23-6L



Unit: mm

Symbol		A	A1	A2	b	c	D
Spec	Min	1.050	0.000	1.050	0.300	0.100	2.820
	Max	1.250	0.100	1.150	0.500	0.200	3.020
Symbol		E	E1	e	e1	L	θ
Spec	Min	1.500	2.650	0.950BSC	1.800	0.300	0°
	Max	1.700	2.950		2.000	0.600	8°