

KWSRV05-4

Features

- 12A Peak Pulse Current($t_p=8/20\mu s$)
- Replacement for SOT23-6
- Protects two I/O and one power line
- Low Clamping Voltage
- Reverse Voltage:5V
- Low Leakage Current
- Response Time is Typically $<1\text{ ns}$

Mechanical Characteristics

- JEDEC SOT23-6 package
- ROHS Compliant
- Marking:Marking Code

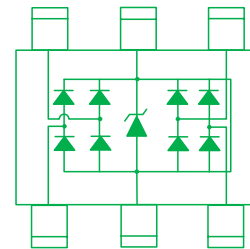
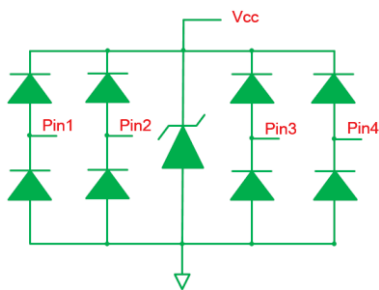
IEC Compatibility(EN61000-4)

- IEC61000-4-2(ESD) $\pm 15\text{ kV}$ (air), $\pm 8\text{ kV}$ (contact)
- IEC61000-4-4(EFT)40A(5/50ns)
- IEC61000-4-5(Surge)12A(8/20us)

Applications

- Cellular Handsets and Accessories
- Digital Visual Interface(DVI)
- PCI Express
- Set-Top Box
- Servers, Notebook, and Desktop PC
- USB1.1/2.0 Ports

Schematic & Pin Configuration



SOT23-6 Top View

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power($t_p=8/20\mu s$)	PPK	300	Watts
Lead Soldering Temperature	TL	260(10 sec.)	$^{\circ}\text{C}/\text{W}$
Operating Temperature	TJ	-55-150	$^{\circ}\text{C}$
Storage Temperature	TSTG	-40-120	$^{\circ}\text{C}$
IEC61000-4-2	VPP	Air 15 Contact 8	KV

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Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_t=1mA$	6			V
Leakage Current	I_R	@ V_{RWM}			5	μA
Clamping Voltage	V_C	@5A			17.5	V
Forward Voltage	V_F	$I_T=10mA$			1.2	V
Peak Pulse Current	I_{PP}	8/20 μs			5	A
Junction Capacitance	$C_{I/O-GND}$	$V_R=0V, f=1MHz$		3	5	pf
	$C_{I/O-I/O}$	$V_R=0V, f=1MHz$		1.5		pf

Figure1:Peak Pulse Power Vs Pulse Time

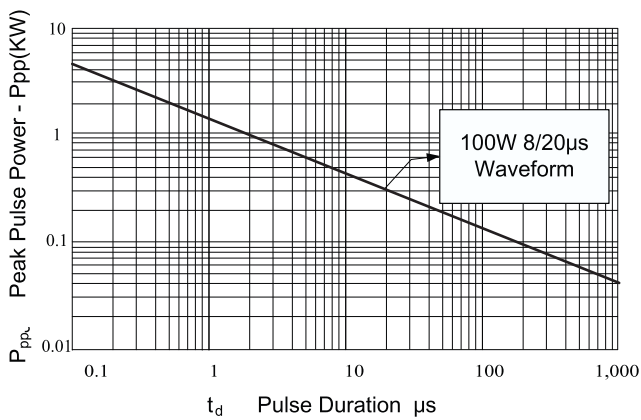


Figure2:Power Derating Curve

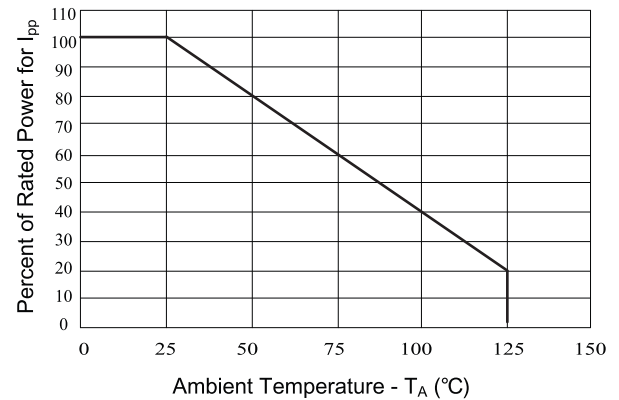


Figure3:Clamping Voltage vs. Peak Pulse Current

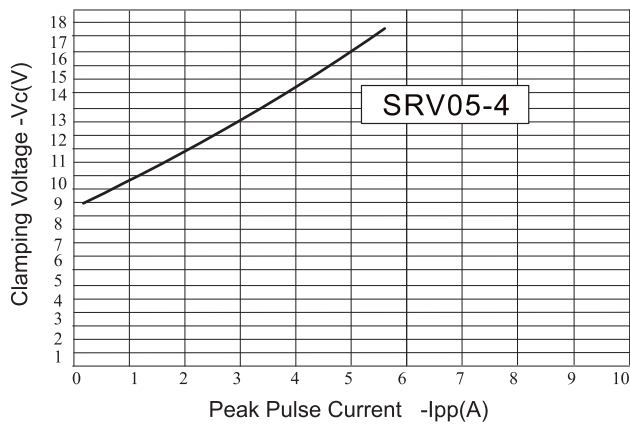
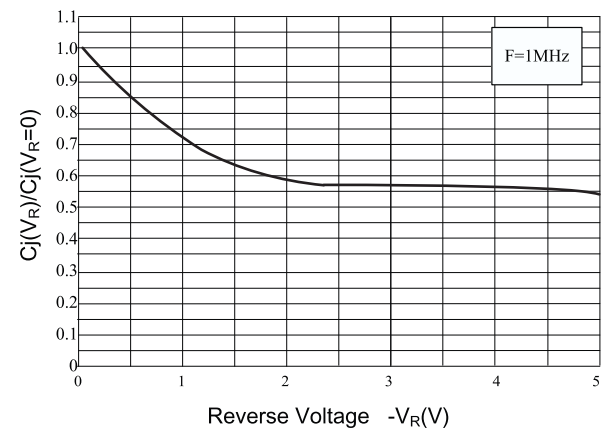


Figure4:Normalized Junction Capacitance vs. Reverse Voltage



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Figure5:Pulse Waveform

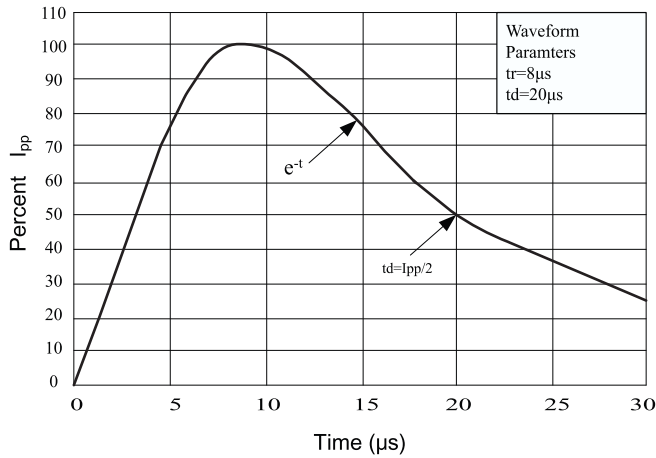
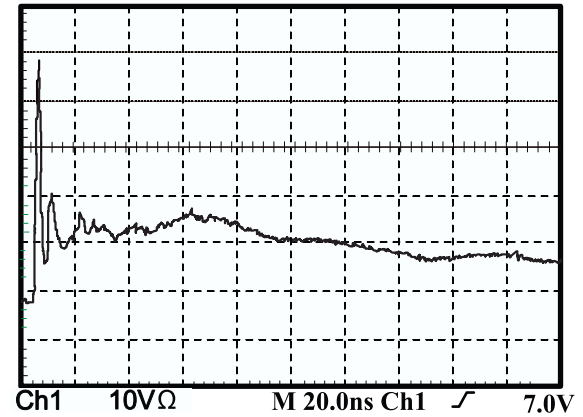
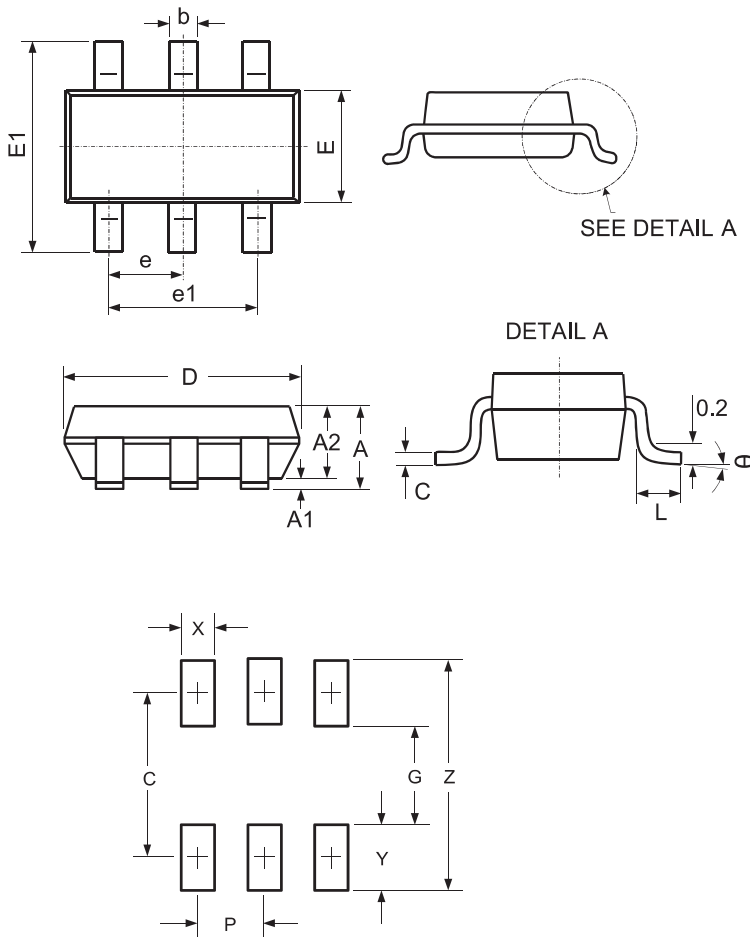


Figure6:ESD Clamping(8kV Contact per IEC 61000-4-2)



Outline Drawing-SOT23-6



Symbol	Dimensions			
	Inches		Millimeter	
	Min	Max	Min	Max
A	0.041	0.049	1.050	1.250
A1	0.000	0.004	0.000	0.100
A2	0.041	0.045	1.050	1.150
D	0.111	0.119	2.820	3.020
E	0.059	0.067	1.500	1.700
E1	0.104	0.116	2.650	2.950
e	0.037(BSC)		0.950(BSC)	
e1	0.071	0.079	1.800	2.000
L	0.012	0.024	0.300	0.600
θ	0°	8°	0°	8°

DIMENSIONS		
DIM	Inches	Millimeters
Z	0.141	3.60
G	0.055	1.40
P	0.037	0.95
X	0.024	0.60
Y	0.043	1.10
C	(0.098)	(2.50)