

## ESRV05-4

### Low Capacitance TVS Array

#### Description

The ESRV05-4 has been specifically designed to protect sensitive components which are connected to data and transmission lines from overvoltage caused by electrostatic discharge (ESD), electrical fast transients (EFT), and lightning.

The unique design of the series devices incorporates eight surge rated, low capacitance steering diodes and a TVS diode in a single package. During transient conditions, the steering diodes direct the transient to either the positive side of the power supply line or to ground. The internal TVS diode prevents over-voltage on the power line, protecting any down-stream components.

#### Applications:

- USB 2.0 Power and Data Line Protection
- Video Graphics Cards
- Monitors and Flat Panel Displays
- Digital Video Interface (DVI)
- 10/100/1000 Ethernet
- Notebook Computers · SIM Ports
- ATM Interfaces
- IEEE 1394 Firewire Ports
- RoHS compliant package

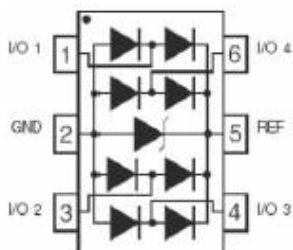
#### Packing & Order Information

Shipping : 3,000/Reel

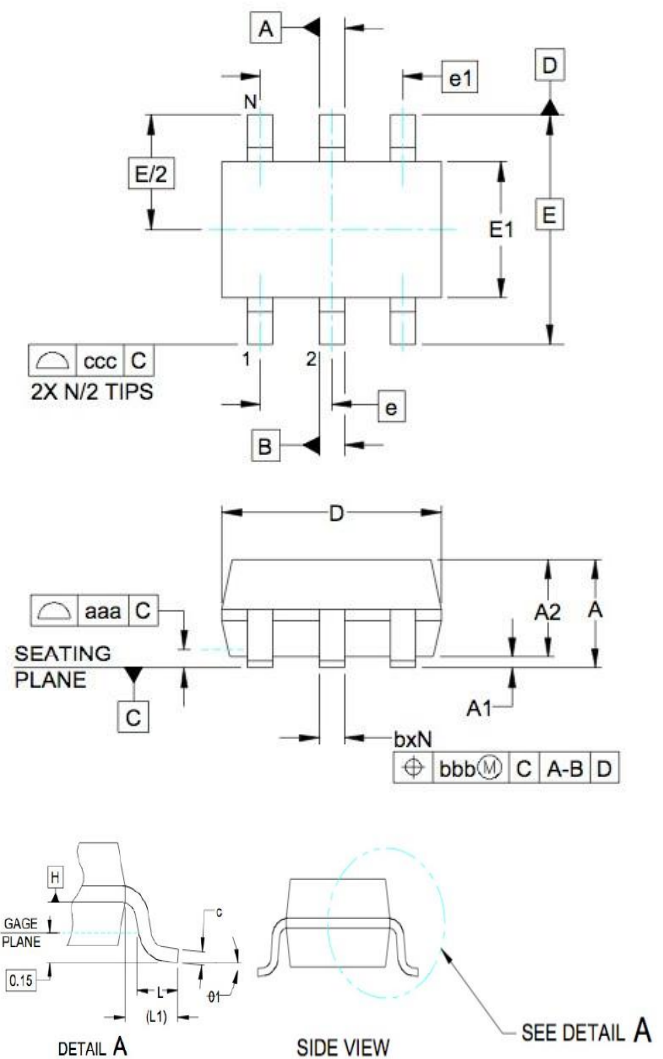


**RoHS  
COMPLIANT**

#### Graphic symbol



SOT23-6



DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	-	-	.043	-	-	1.10
A1	.000	-	.004	0.00	-	0.10
A2	.028	.035	.039	0.70	0.90	1.00
b	.006	-	.012	0.15	-	0.30
c	.003	-	.009	0.08	-	0.22
D	.071	.079	.087	1.80	2.00	2.20
E1	.045	.049	.053	1.15	1.25	1.35
E	.083 BSC			2.10 BSC		
e	.026 BSC			0.65 BSC		
e1	.051			1.30 BSC		
L	.010	.014	.018	0.26	0.36	0.46
L1	(.017)			(0.42)		
N	6			6		
theta1	0°	-	8°	0°	-	8°
aaa	.004			0.10		
bbb	.004			0.10		
ccc	.012			0.30		

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#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

##### Maximum Ratings @25°C unless otherwise Specified

Symbol	Parameter	Value	Unit
Ppk	Peak Pulse Power (tp = 8/20µs) See Figure 1	500	W
I <sub>PP</sub>	Peak Pulse Current (tp = 8/20µs)	43	A
T <sub>STG</sub>	Storage Temperature Range	-55 to +150	°C
T <sub>J</sub>	Operating Temperature	-55 to +150	°C
V <sub>F</sub>	Forward Surge Rating (1/20 seconds @ 25°C, I <sub>F</sub> =10 mA)	1.5	°C

##### Electrical Characteristics

Part Numbers	VBR			IT	VRWM	IR	Cj
	Min.	Typ.	Max.				TYP
	V	V	V				PF
ERV05-4	6.0	6.7	-	1	5.0	5	3.5

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#### Typical Device Characteristics

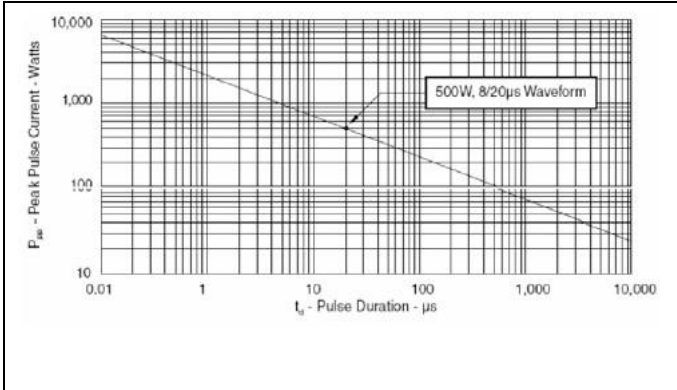


FIG.1-PEAK PULSE POWER VS PULSE TIME

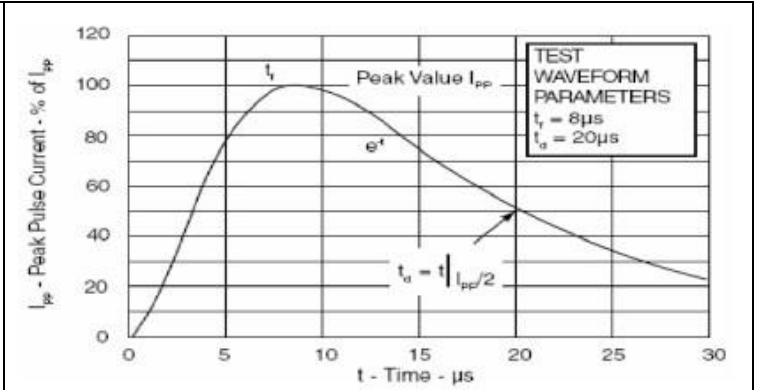


FIG.2-POWER WAVE FORM

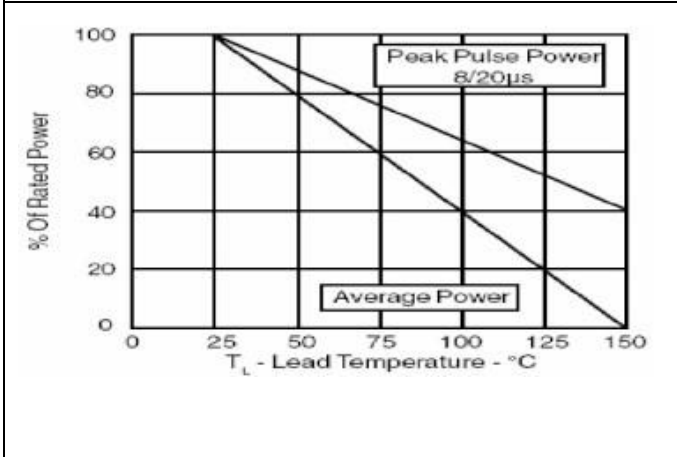


FIG.3-POWER DERATING CURVE

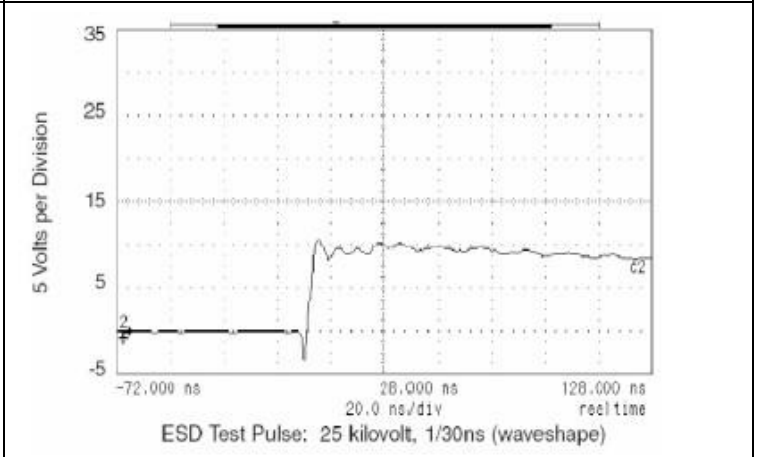


FIG.4-OVERSHOOT & CLAMPING VOLTAGE FOR ERV05-4

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