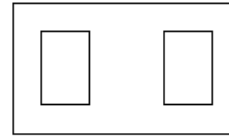


Features

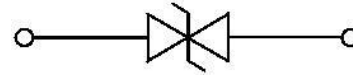
- 35Watts peak pulse power ($t_p = 8/20\mu s$)
- CSP0402 package
- Snap-Back technology
- Low clamping voltage
- Low leakage current
- Ultra low capacitance (0.25pF typical)
- ESD Protection for high-speed data lines to:
 - IEC 61000-4-2 $\pm 10kV$ contact $\pm 12kV$ air
 - IEC 61000-4-4 (EFT) 40A (5/50ns)
 - IEC 61000-4-5 (Lightning) 5A (8/20 μs)
- RoHS compliant

Applications

- USB 3.0, USB 2.0, MHL
- HDMI 2.0, Display Port 1.3, eSATA
- Unified Display Interface (UDI)
- Digital Visual Interface (DVI)
- 1G/2.5G/5G/10G Ethernet



CSP0402



Schematic Diagram

Absolute Maximum Ratings

($T_A=25^\circ C$, Unless otherwise specified.)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_P=8/20\mu s$)	P_{PP}	35	W
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{PP}	5	A
Junction Temperature	T_J	-55 to +125	$^\circ C$
Storage temperature	T_{STG}	-55 to +150	$^\circ C$

Electrical Characteristics

($T_A=25^\circ C$, Unless otherwise specified.)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	5.5	6.8	12	V
Reverse Leakage Current	I_R	$V_R=5.0V$		0.01	0.1	μA
Trigger Voltage	V_T	$I_{PP}=5A, T_P=8/20\mu s$		9.0		V
Clamping Voltage	V_C	$I_{PP}=5A, T_P=8/20\mu s$		6.5		V
Clamping Voltage (TLP 8A)	V_C	IEC 61000-4-2 Level 2 (± 4 kV Contact, ± 4 kV Air)		4.5		V
Clamping Voltage (TLP 16A)	V_C	IEC 61000-4-2 Level 4 (± 8 kV Contact, ± 8 kV Air)		6.0		V
Dynamic Resistance	R_{dyn}	$I_F=0\sim 30A, t=TLP$		0.25		Ω
Junction Capacitance	C_J	$V_R=0V, f=1MHz$		0.25	0.35	pF

Typical Characteristic Curves

Fig.1 Peak Pulse Power Rating Curve

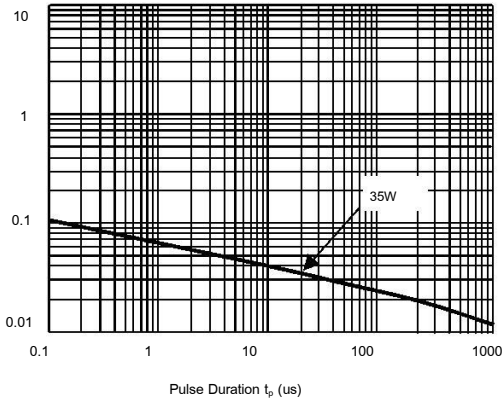


Fig.2 Pulse Derating Curve

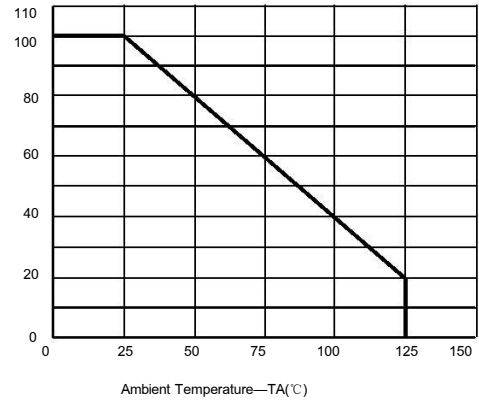


Fig.3 IEC61000-4-2 +8kV Contact Discharge

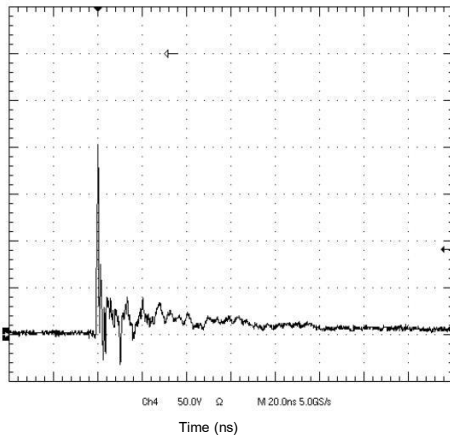


Fig.4 IEC61000-4-2 -8kV Contact Discharge

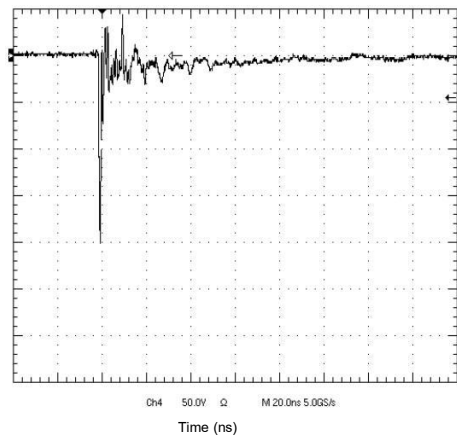


Fig.5 Transmission Line Pulse (tp=100ns)

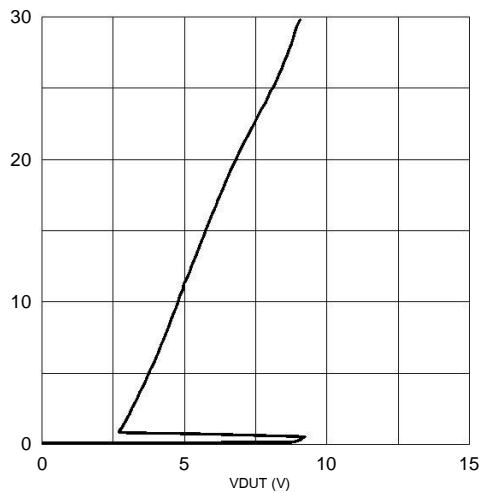
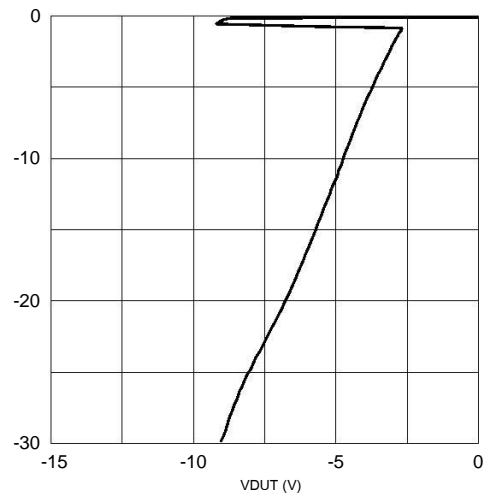
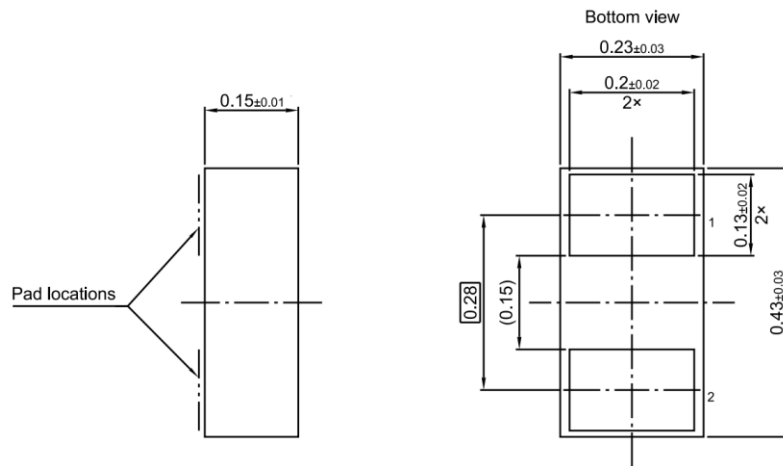


Fig.6 Transmission Line Pulse (tp=100ns)



Product Dimensions



Marking



Order Information

Device	Package	Carrier	Quantity	HSF Status
VT5VC0402-5A	CSP0402	Tape & Reel (7")	10000pcs / Reel	RoHS Compliant