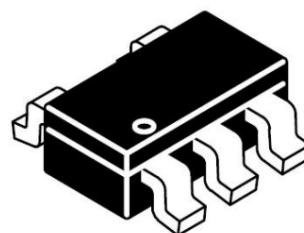


Bi-directional TVS Diode Array For ESD and Latch-Up Protection

Features:

- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 15\text{kV}$
 - Contact discharge: $\pm 8\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 5A (8/20 μs)
- RoHS Compliant

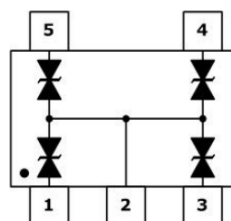
SOT-25



Applications:

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100 Ethernet

Pin Configuration



Mechanical Characteristics

- Package: SOT-25
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 3,000 pcs
- Reel Size: 7 inch

Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P _{pp}	100	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 15	Kv
ESD per IEC 61000-4-2 (Contact)		± 8	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STJ}	-55 to +150	°C

Electrical Characteristics (TA=25°C unless otherwise specified)

Part Number	Device Marking	V _{RWM} (V)	V _{BR} (V)	I _T (mA)	V _C @1A	V _C		I _R μA (Max)	C (Pf) (Typ.)
						(Max)	(@A)		
KWSQV05C	S5V	5	6.5	1	9.8	15	2.5	1	20

Characteristic Curves

Fig1. 8/20μs Pulse Waveform

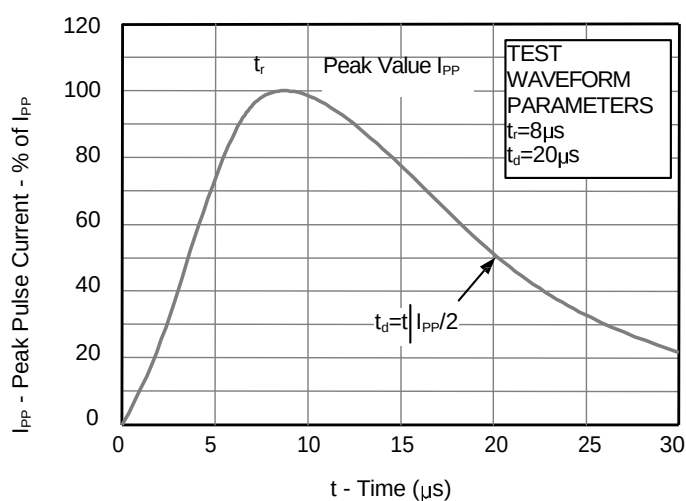


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

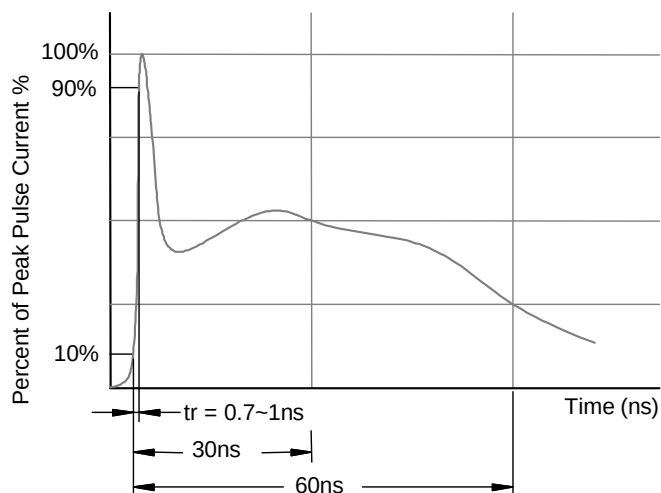
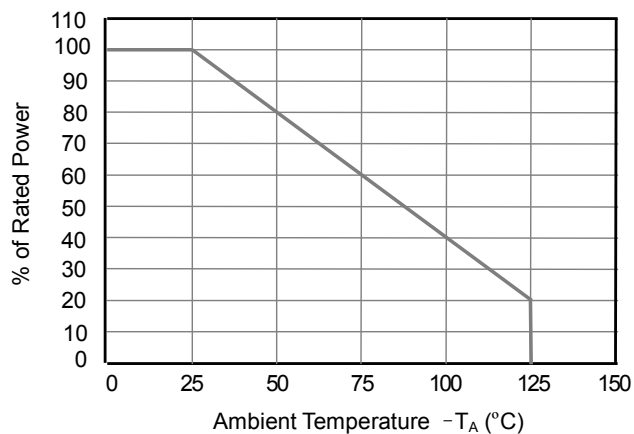
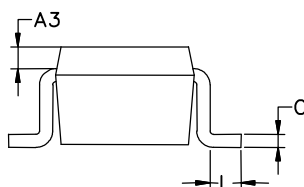
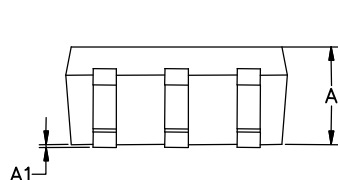
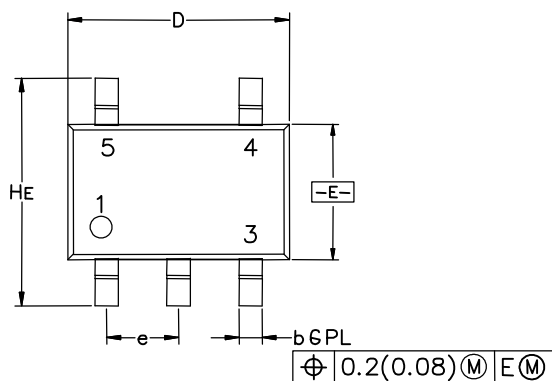


Fig3. Power Derating Curve

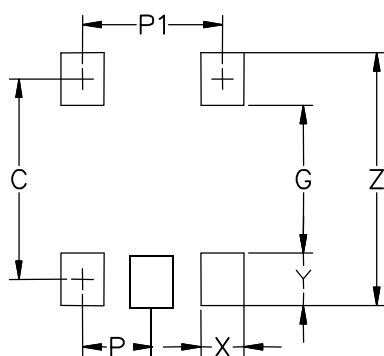


SOT-25 Package Outline & Dimensions



Symbol	Inches			Millimeters		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.039	0.043	0.051	1.00	1.10	1.30
A1	-	-	0.004	0.00	-	0.10
A3	0.008	0.012	0.016	0.20	0.30	0.40
b	0.014	0.016	0.020	0.35	0.40	0.50
C	0.004	0.006	0.010	0.10	0.15	0.25
D	0.106	0.114	0.122	2.70	2.90	3.10
E	0.059	0.063	0.071	1.50	1.60	1.80
e	0.075 BSC			1.90 BSC		
L	0.015	-	-	0.37	-	-
H _E	0.102	0.110	0.118	2.60	2.80	3.00

Soldering Footprint



Symbol	Inches	Millimeters
C	0.094	2.40
G	0.055	1.40
P	0.037	0.95
P1	0.075	1.90
X	0.028	0.70
Y	0.039	1.0
Z	0.134	3.40