Elektronische Bauelemente

KST05VL4E-C

45W, 5V

Ultra-Low Capacitance ESD Protection Diode

RoHS Compliant Product
A suffix of "-C" specifies halogen and lead-free

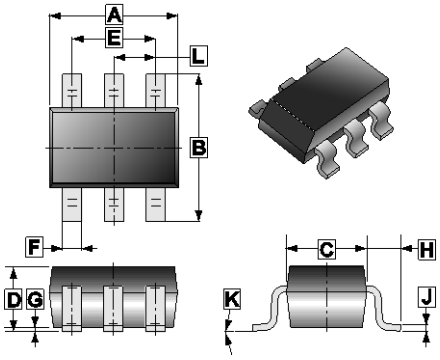
FEATURES

- Low Capacitance: 0.45pF (Typ.)
- Reverse Working Voltage: 5V
- IEC 61000-4-2 (Air): ±27kV
- IEC 61000-4-2 (Contact): ±26kV
- IEC 61000-4-4 (EFT): 60A
- IEC 61000-4-5 (Surge): 3.5A (8/20us)

APPLICATIONS

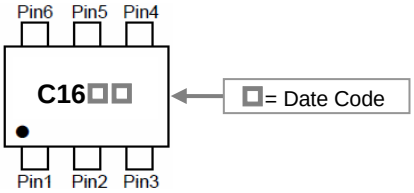
- USB2.0 Data Line Protection
- Desktops, Servers and Notebooks
- Industrial Instruments
- Digital Visual Interfaces (DVI)
- HDMI 1.4/2.0

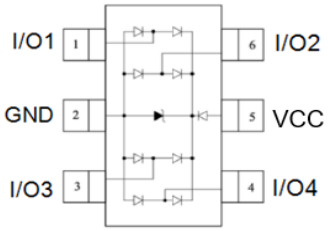
SOT-26



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.10	G	0	0.10
B	2.60	3.00	H	0.60 REF.	
C	1.40	1.80	J	0.12 REF.	
D	-	1.30	K	0°	10°
E	1.90 REF.		L	0.95 REF.	
F	0.25	0.50			

MARKING





PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-26	3K	7 inch

ORDER INFORMATION

Part Number	Type
KST05VL4E-C	Lead (Pb)-free and Halogen-free

ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter		Symbol	Ratings	Unit
IEC 61000-4-2 ESD Voltage	Air Model	V_{ESD}	±27	KV
	Contact Model		±26	
Peak Pulse Power @tp=8/20μs		P_{PP}	45	W
Peak Pulse Current @tp=8/20μs		I_{PP}	3.5	A
Operating Junction Temperature Range		T_J	-55~150	°C
Storage Temperature Range		T_{STG}	-55~150	

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Reverse Working Voltage	V_{RWM}	-	-	5	V	
Reverse Breakdown Voltage	V_{BR}	6.8	-	-	V	I_R=1mA
Reverse Leakage Current	I_R	-	5	30	nA	V_{RWM}=5V
Surge Clamping Voltage @tp=8/20μs	V_C	-	8.9	9.8	V	I_{PP}=1A
		-	11.5	13		I_{PP}=3.5A
TLP Clamping Voltage @tp=10/100ns		-	8.2	10	V	I_{PP}=1A
		-	14.5	18		I_{PP}=16A
Dynamic Resistance	R_{DYN}	-	0.49	-	Ω	I/O Pin to GND
Junction Capacitance	C_J	-	0.45	0.55	pF	V_R=0V, f=1MHz

RATINGS AND CHARACTERISTICS CURVES

Fig1. TLP Curve

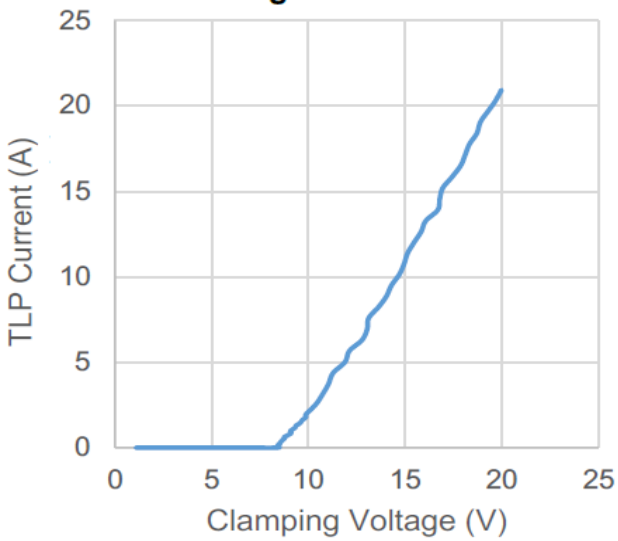


Fig2. Junction Capacitance @ f=1MHz Surge Clamping voltage (IEC61000-4-5)

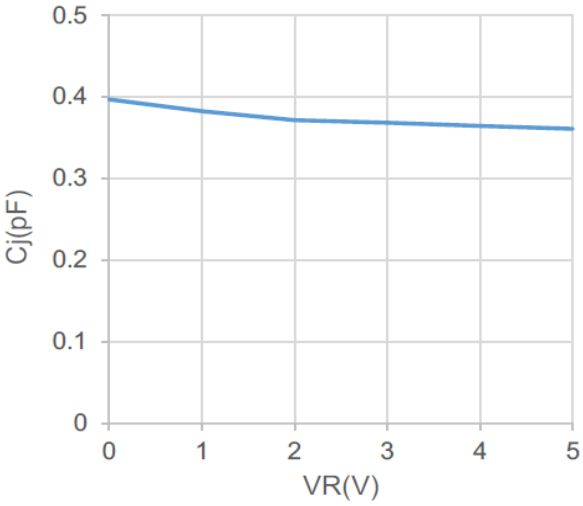


Fig3. IEC61000-4-5 test waveform (tr=8/20us)

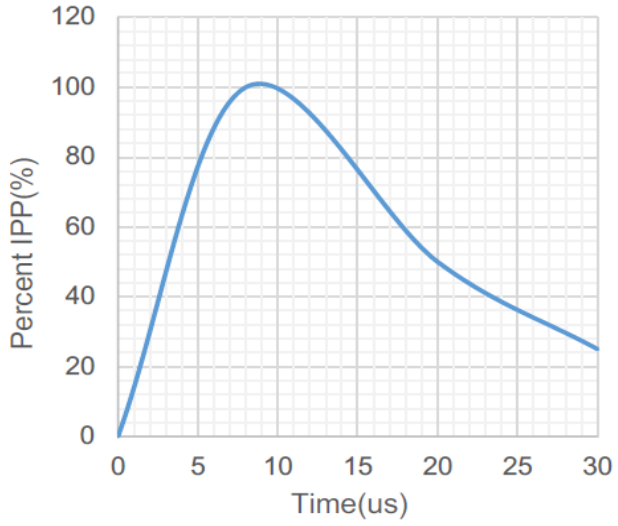


Fig4. Surge Clamping voltage (IEC61000-4-5)

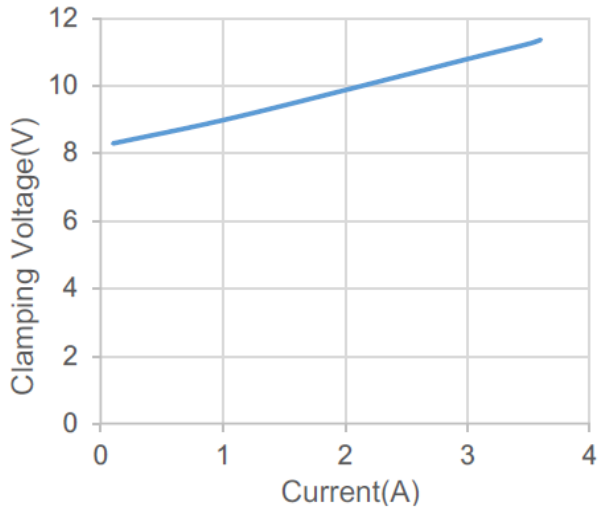
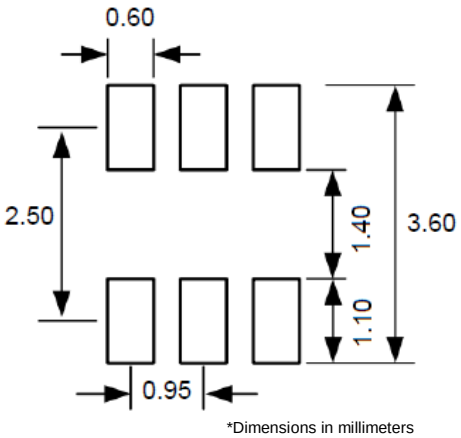


Fig5. Mounting Pad Layout



*Dimensions in millimeters