Elektronische Bauelemente

KST05UL5E-C

45W, 5.5V

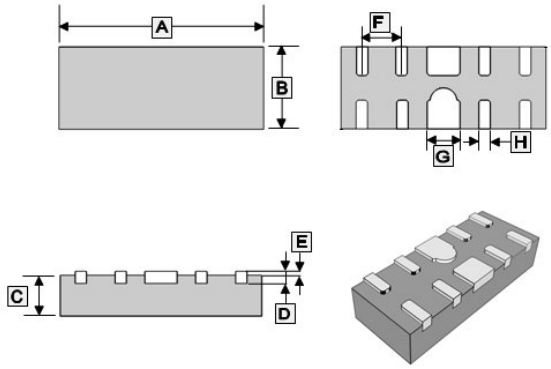
Ultra Low Capacitance ESD Protection Array

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

DESCRIPTION

- Reverse working voltage: 5.5V
- Ultra-low capacitance: 0.4pF (Typ.)
- IEC 61000-4-2 (ESD): ±25kV (Air)
- IEC 61000-4-2 (ESD): ±25kV (Contact)
- IEC 61000-4-4 (FET): 40A (5/50ns)
- IEC 61000-4-5 (Surge): 3.5A (8/20μs)

DFN2510



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.40	2.60	E	-	0.05
B	0.90	1.10	F	0.50 BSC.	
C	0.55 TYP.		G	-	0.45
D	0.150 REF.		H	0.15	0.25

APPLICATIONS

- Desktops, Servers and Notebooks
- USB 2.0
- Display Ports
- Digital Visual Interface (DVI)
- HDMI 1.3/1.4

MARKING

N9

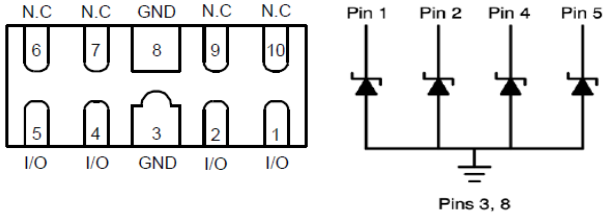
PACKAGE INFORMATION

Package	MPQ	Leader Size
DFN2510	3K	7 inch

ORDER INFORMATION

Part Number	Type
KST05UL5E-C	Lead (Pb)-free and Halogen-free

Pin Diagram



ABSOLUTE MAXIMUM RATINGS (T_A=25℃ unless otherwise specified)

Parameter		Symbol	Value	Unit
IEC 61000-4-2 (ESD)	Air Contact	V_{ESD}	±25	kV
	Contact Discharge		±25	
Peak Pulse Power (tp=8/20μs)		P_{PP}	45	W
Peak Pulse Current (tp=8/20μs)		I_{PP}	3.5	A
Operating & Storage Temperature Range		T_J, T_{STG}	-40~125, -55~150	℃

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

Parameter	Symbol	Min.	Typ.	Max.	Units	Test Condition
Reverse Working Voltage	V_{RWM}	-	-	5.5	V	
Breakdown Voltage	V_{BR}	6.8	-	-	V	I_T=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	tp=10/100ns, I/O Pin to GND
Junction Capacitance	C_J	-	0.4	0.48	pF	V_R=0V, f=1MHz, I/O to GND
		-	0.18	0.25		V_R=0V, f=1MHz, Between I/O Pins

RATINGS AND CHARACTERISTICS CURVES

Fig1. Positive Clamping Voltage(TLP)

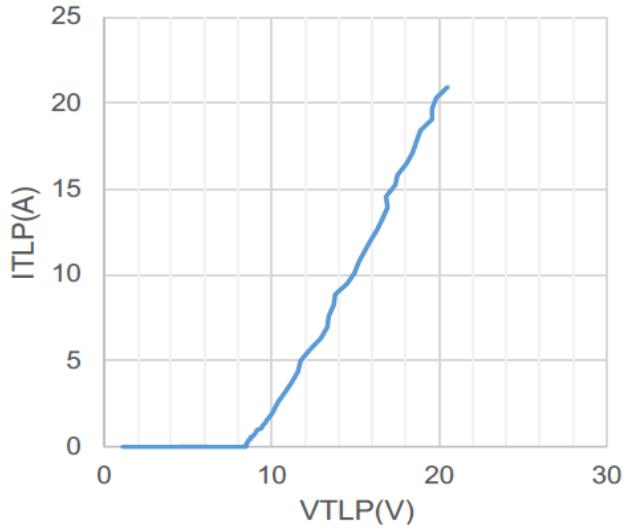


Fig2. Junction Capacitance @ f=1MHz

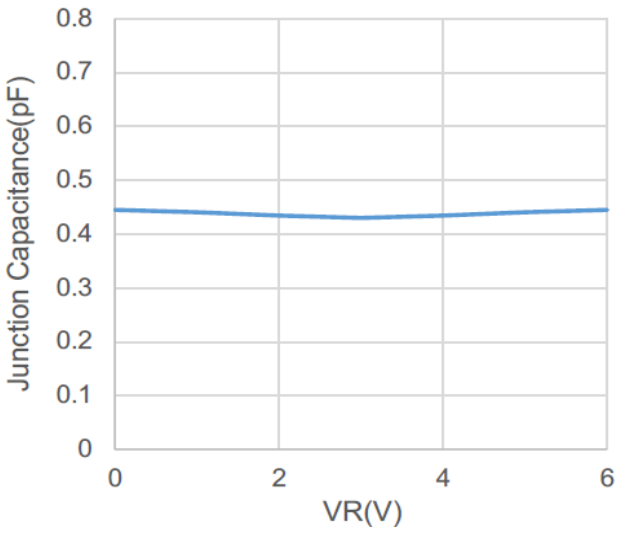


Fig3. IEC61000-4-5 test waveform

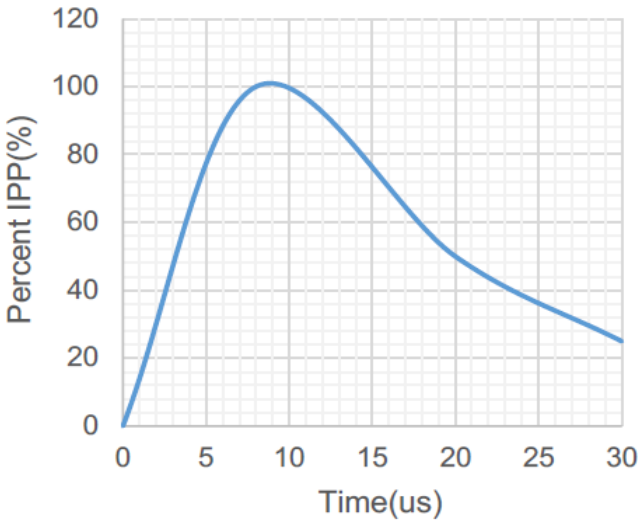


Fig4. Surge Clamping voltage (IEC61000-4-5)

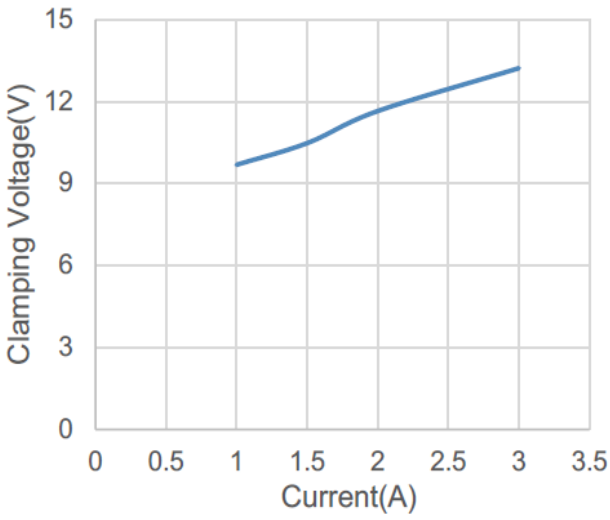
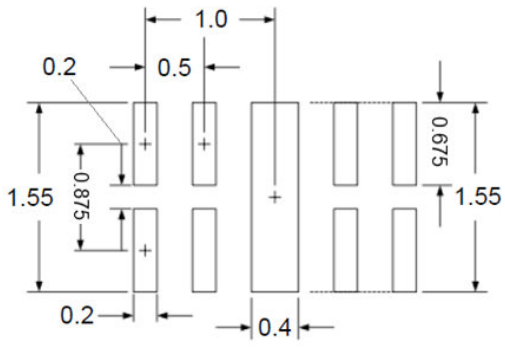


Fig5. Mounting Pad Layout



*Dimensions in millimeters