

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

## DESCRIPTION

The KS05VL4 is an ultra-low capacitance TVS designed to protection for high-speed data interfaces. With typical capacitance of 0.20pF (I/O to I/O).

## APPLICATIONS

- Serial ATA
- MDDI Ports
- Display Ports
- USB 2.0/3.0 Power and Data Line Protection
- High Definition Multi-Media Interface (HDMI)
- Digital Visual Interface (DVI)

## FEATURES

- Low Clamping Voltage
- Low Leakage Current
- Low Capacitance: 0.2pF (I/O to I/O).

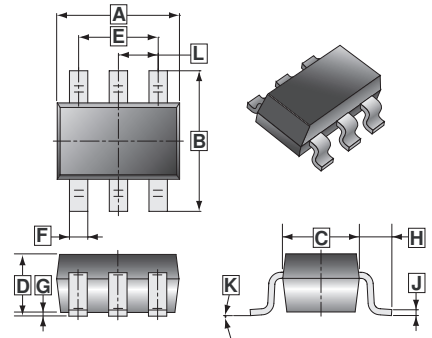
## MARKING



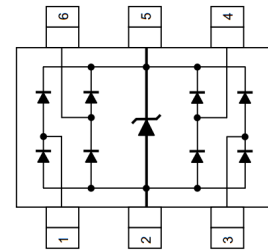
## PACKAGE INFORMATION

Package	MPQ	Leader Size
TSOP-6	3K	7 inch

## TSOP-6



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	1.45	MAX.	K	0°	10°
E	1.90	REF.	L	0.95	REF.
F	0.30	0.50			



## ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise specified)

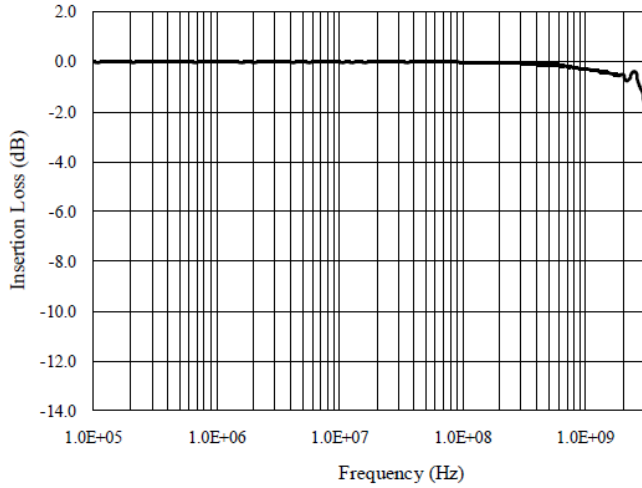
Rating		Symbol	Value	Unit
IEC 61000-4-2 (ESD)	Air contact	V <sub>ESD</sub>	±25	kV
	Contact discharge		±20	
Peak Pulse Power (tp=8/20us)		P <sub>PK</sub>	60	W
Peak Pulse Current (tp=8/20us)		I <sub>PP</sub>	4	A
Storage Temperature Range		T <sub>J</sub> , T <sub>STG</sub>	-55~125, -55 ~ 150	°C

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise specified)

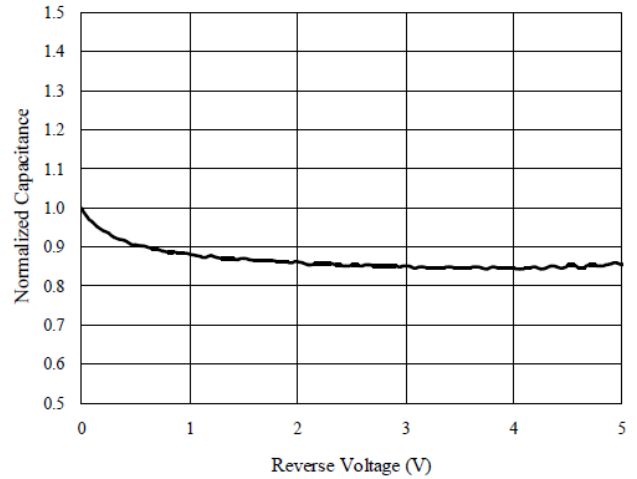
Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Reveres Maximum Working Voltage	V <sub>RWM</sub>	I/O-GND	-	-	5	V
Reveres Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> =5V, I/O-GND	-	-	1	µA
Reveres Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA, I/O-GND	6	-	9	V
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =1A, tp=8/20us, I/O-GND	-	-	10	V
		I <sub>PP</sub> =4A, tp=8/20us, I/O-GND	-	-	15	
		I <sub>PP</sub> =8A, tp=8/20us VCC-GND	-	-	15	
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> =0V, f=1MHz, I/O-I/O	-	0.2	0.3	pF
		V <sub>R</sub> =0V, f=1MHz, I/O-GND	-	0.45	0.5	pF
		V <sub>R</sub> =0V, f=1MHz, VCC-GND	-	0.8	-	pF

**CHARACTERISTICS CURVES**

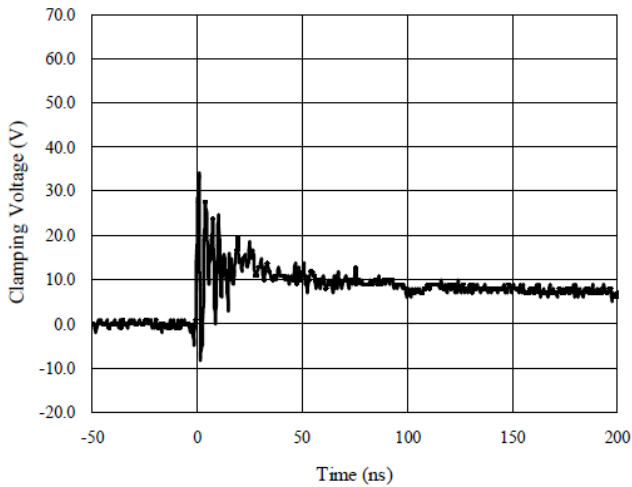
Insertion Loss S21 of I/O to GND



Normalized Capacitance vs. Reverse Voltage



ESD Clamping  
(+8kV Contact per IEC 61000-4-2)



ESD Clamping  
(-8kV Contact per IEC 61000-4-2)

