

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

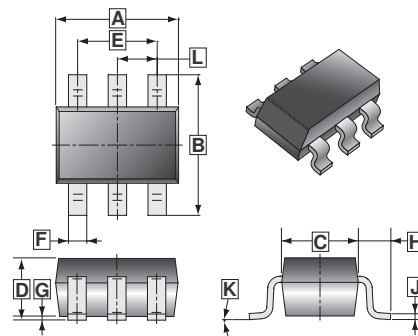
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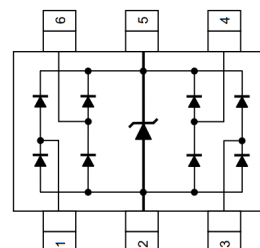
PACKAGE INFORMATION

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_A=25°C unless otherwise specified)

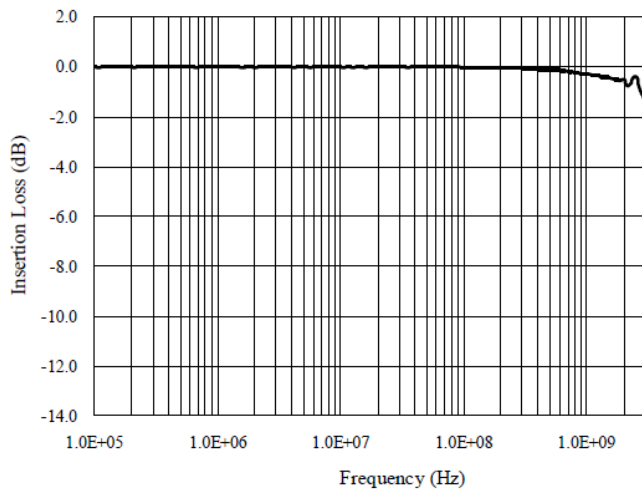
Rating		Symbol	Value	Unit
IEC 61000-4-2 (ESD)	Air contact	V _{ESD}	±25	kV
	Contact discharge		±20	
Peak Pulse Power (tp=8/20us)		P _{PK}	60	W
Peak Pulse Current (tp=8/20us)		I _{PP}	4	A
Storage Temperature Range		T _J , T _{STG}	-55~125, -55 ~ 150	°C

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

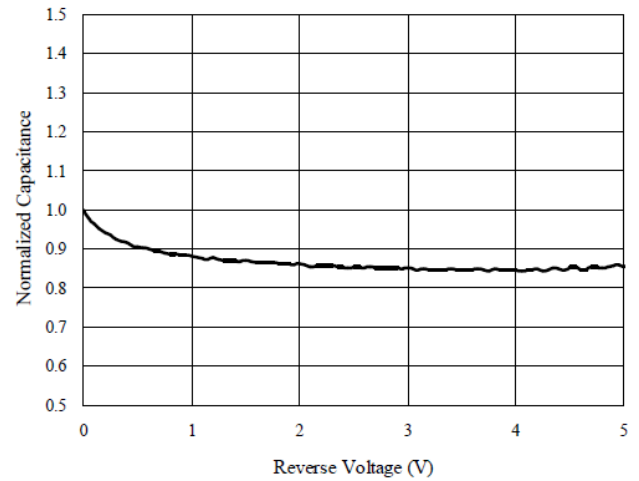
Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Reveres Maximum Working Voltage	V _{RWM}	I/O-GND	-	-	5	V
Reveres Leakage Current	I _R	V _{RWM} =5V, I/O-GND	-	-	1	μA
Reveres Breakdown Voltage	V _{BR}	I _T =1mA, I/O-GND	6	-	9	V
Clamping Voltage	V _C	I _{PP} =1A, tp=8/20us, I/O-GND	-	-	10	V
		I _{PP} =4A,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

CHARACTERISTICS CURVES

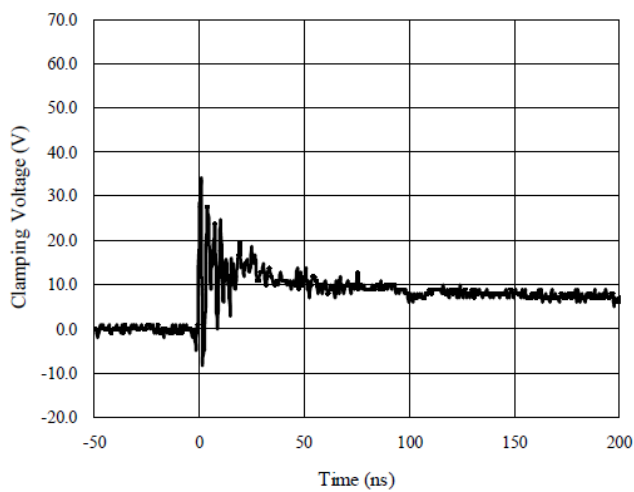
Insertion Loss S21 of I/O to GND



Normalized Capacitance vs. Reverse Voltage



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



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

