

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

## DESCRIPTION

The KS05UL5 provides a typical line to line capacitance of 0.3pF between I/O pins and low insertion loss up to 3GHz providing greater signal integrity making it ideally suited for HDMI applications, such as Digital TVs, DVD players, Computing, set-top boxes and MDDI applications in mobile computing devices. This series has been specifically designed to protect sensitive components which are connected to high-speed data and transmission lines from overvoltage caused by ESD(electrostatic discharge), CDE (Cable Discharge Events),and EFT (electrical fast transients).

## APPLICATIONS

- TVs, monitors , audio
- Portable devices
- Notebooks, mother boards, graphic cards and ports.
- Set-top box and game consoles.

## FEATURES

- Low capacitance: 0.3pF Typical between I/O channel
- Low leakage current
- Response time < 1ns
- Solid-state silicon avalanche technology

## MARKING

.0524P

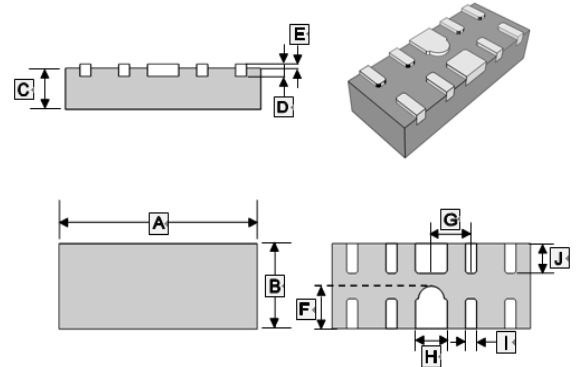
## PACKAGE INFORMATION

Package	MPQ	Leader Size
DFN2510	3K	7 inch

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

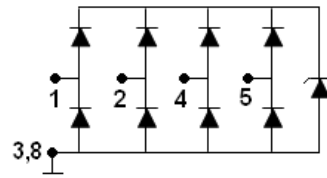
Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD)	Air contact	±15	kV
	Contact discharge	±8	
Peak pulse power (tp=8/20us)	P <sub>PK</sub>	150	W
Peak pulse current (tp=8/20us)	I <sub>PP</sub>	5	A
Operation & Storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 ~ +150	°C

### DFN2510

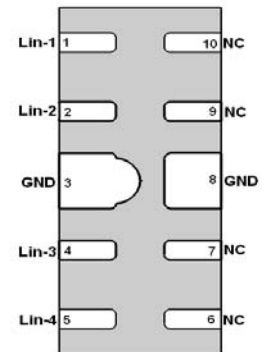


REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.40	2.60	F	0.41	0.61
B	0.90	1.10	G	0.500 TYP.	
C	0.55TYP.		H	0.30	0.50
D	0.150 REF.		I	0.15	0.25
E	0.00	0.05	J	0.30	0.46

### Circuit Diagram



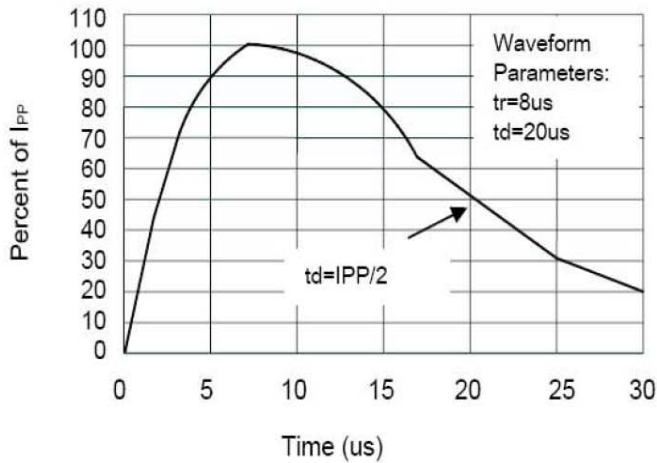
### (Top view)



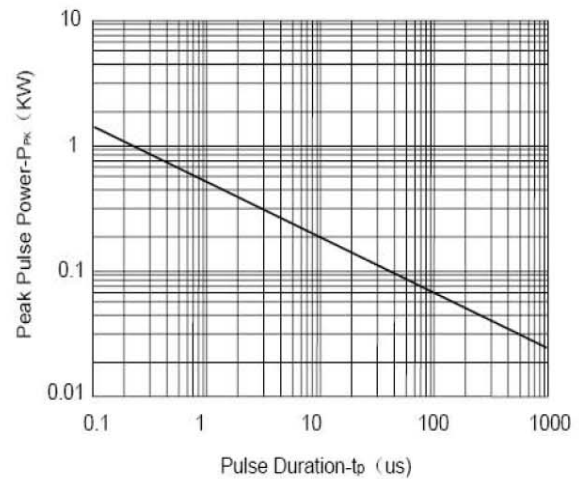
**ELECTRICAL CHARACTERISTICS** ( $T_A=25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Reverse Working Voltage	$V_{RWM}$	I/O-to-GND	-	-	5	V
Reverse Leakage Current	$I_R$	$V_{RWM}=5\text{V}$ , I/O-to-GND	-	-	1	$\mu\text{A}$
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1\text{mA}$ , I/O-to-GND	6	-	-	V
Forward Voltage	$V_F$	$I_T=15\text{mA}$	-	0.85	1.2	V
Clamping Voltage	$V_{Clamp}$	$I_{PP}=1\text{A}$ , $t_p=8/20\mu\text{s}$ , I/O-to-GND	-	-	15.5	V
		$I_{PP}=5\text{A}$ , $t_p=8/20\mu\text{s}$ , I/O-to-GND	-	-	25	
Junction capacitance	$C_J$	I/O-to-GND $V_R=0$ , $f=1\text{MHz}$	-	0.45	0.8	pF
		I/O-to-I/O $V_R=0$ , $f=1\text{MHz}$	-	0.3	0.6	pF

**RATINGS AND CHARACTERISTICS CURVES**

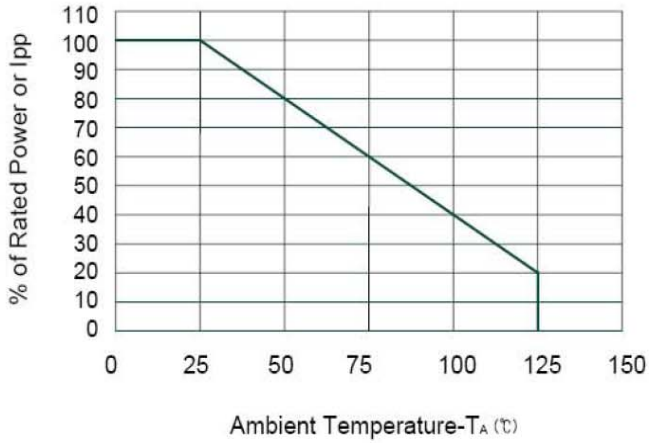


**Pulse Waveform**

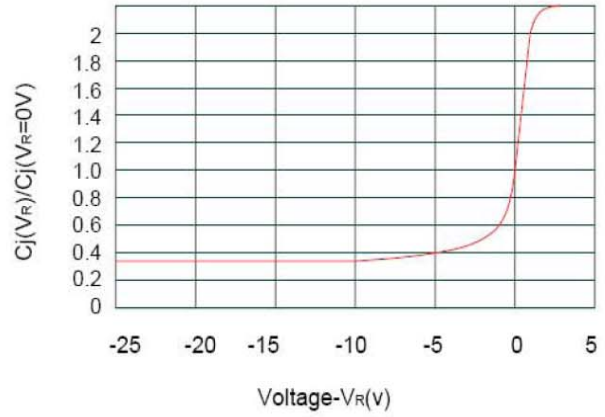


**Non-Repetitive Peak Pulse Power vs. Pulse Time**

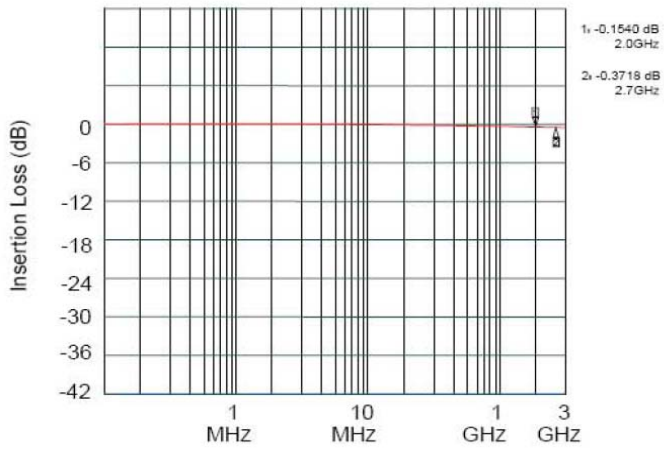
**RATINGS AND CHARACTERISTICS CURVES**



**Power Derating Curve**



**Junction Capacitance vs. Reverse Voltage**



**Insertion Loss S21**