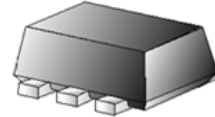


RoHS Compliant Product
A suffix of "-C" specifies halogen and lead-free

FEATURES

- Low Capacitance: 0.8pF (Max.)
- Reverse Working Voltage: 5V
- Low Reverse Clamping Voltage
- Low Leakage Current
- Uni-directional ESD protection of four lines
- Fast response time
- JESD22-A114-B ESD Rating of class 3B per human body model
- IEC 61000-4-2 Level 4 ESD protection

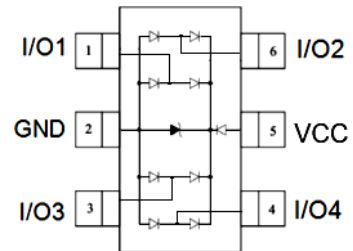
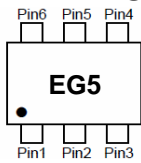
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APPLICATIONS

- Computers and Peripherals
- Audio and Video Equipment
- High Speed Data Lines
- Cell Phone
- MID
- PDA
- High Definition Multi-Media Interface (HDMI)
- Digital Visual Interface (DVI)
- Other Electronics Equipments Communication Systems

MARKING



PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-563	3K	7 inch

ORDER INFORMATION

Part Number	Type
KS05L4E-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} ¹	±25	KV
	Contact Model		±25	
	JESD22-A114-B ESD Voltage		±25	
	Per Human Body Model		±25	
ESD Voltage	Machine Model		±0.4	
Peak Pulse Power (I/O to GND) ²		P _{PP}	90	W
Peak Pulse Current (I/O to GND) ²		I _{PP}	4.5	A
Lead Solder Temperature – Maximum (10 Second Duration)		T _L	260	°C
Operating Junction & Storage Temperature Range		T _J , T _{STG}	-55~150	

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Reverse Working Voltage	V_{RWM}	-	-	5	V	I/O to GND
Breakdown Voltage	V_{BR}	6.5	-	9.4	V	$I_T=1\text{mA}$, I/O to GND
		5.8	-	8.5		$I_T=1\text{mA}$, V_{CC} to GND
Forward Voltage	V_F	0.5	-	1	V	$I_T=10\text{mA}$ GND to I/O & GND to V_{CC}
Reverse Leakage Current	I_R	-	-	1	μA	$V_{RWM}=5\text{V}$ I/O to GND & V_{CC} to GND
Clamping Voltage ²	V_C	-	13.5	20	V	$I_{PP}=4.5\text{A}$, I/O to GND
		-	13	20		$I_{PP}=8\text{A}$, V_{CC} to GND
TLP Clamping Voltage @ Pulse Width=100ns	V_C	-	15	-	V	$I_{TLP}=16\text{A}$, I/O to GND
		-	15	-		$I_{TLP}=16\text{A}$, V_{CC} to GND
Junction Capacitance @ $V_{RWM}=0\text{V}$, $f=1\text{MHz}$	C_J	-	0.45	0.8	pF	I/O to GND
		-	0.25	0.5		I/O to I/O

Notes:

1. Device stressed with ten non-repetitive ESD pulses, per channel (I/O to GND, V_{CC} to GND).
2. Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5.

ESD STANDARDS COMPLIANCE

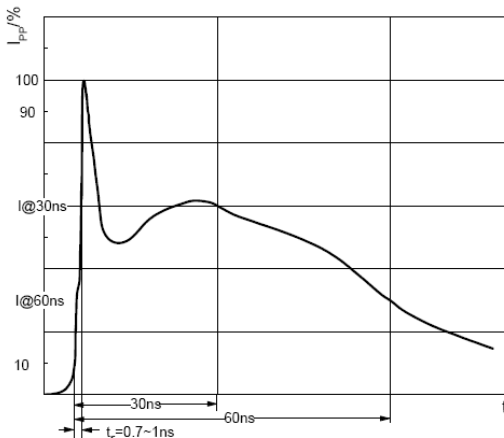
IEC61000-4-2 Standard

Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15

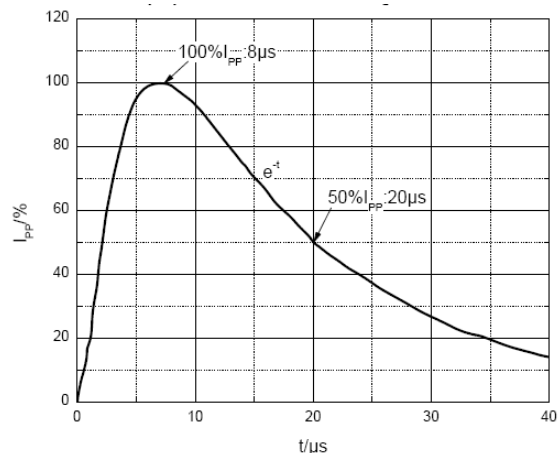
JESD22-A114-B Standard

ESD Class	Human Body Discharge V
0	0~249
1A	250~499
1B	500~999
1C	1000~1999
2	2000~3999
3A	4000~7999
3B	8000~15999

ESD pulse waveform according to IEC61000-4-2

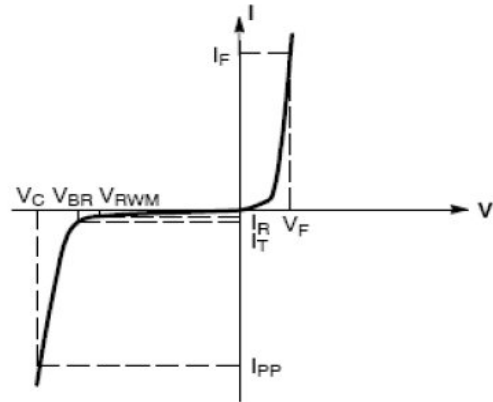


8/20 μs pulse waveform according to IEC 61000-4-5

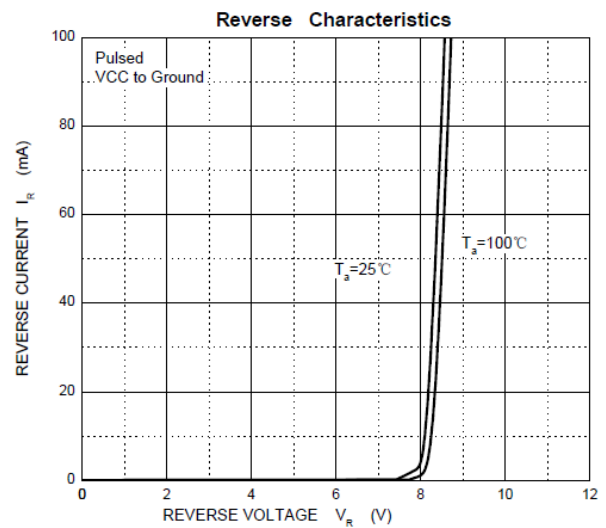
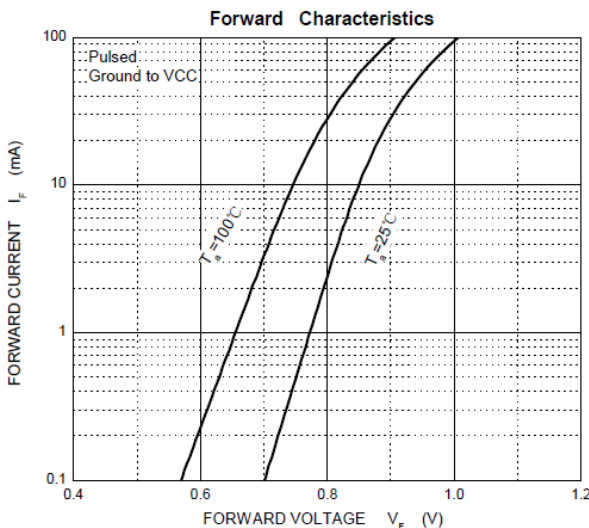
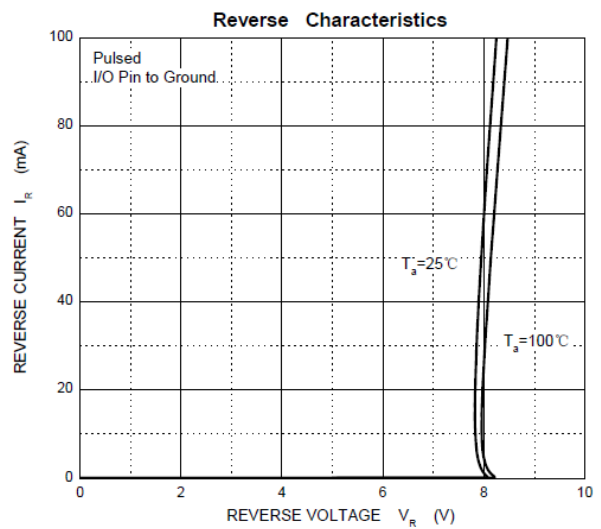
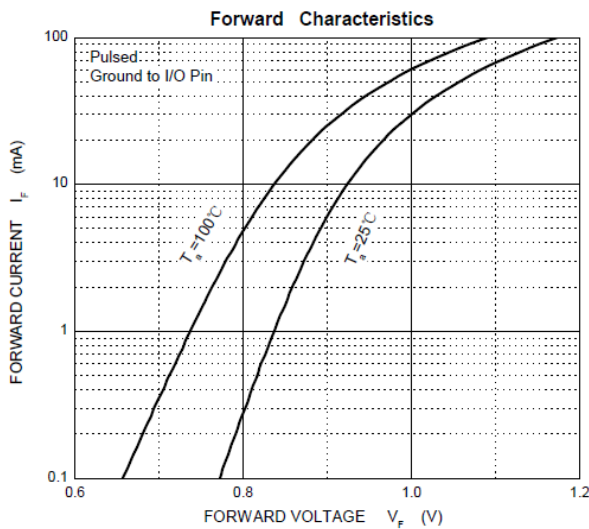


ELECTRICAL PARAMETER

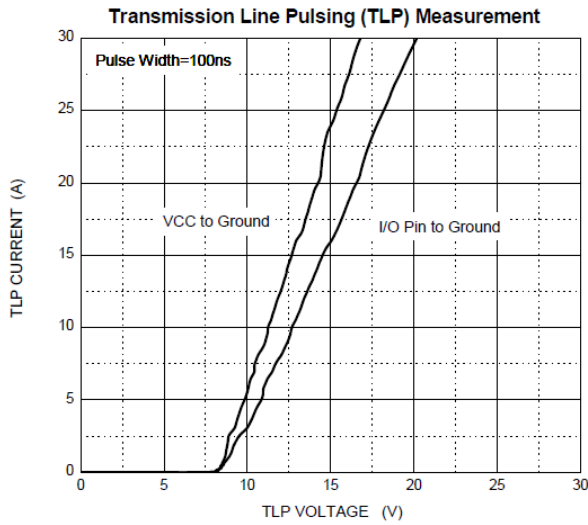
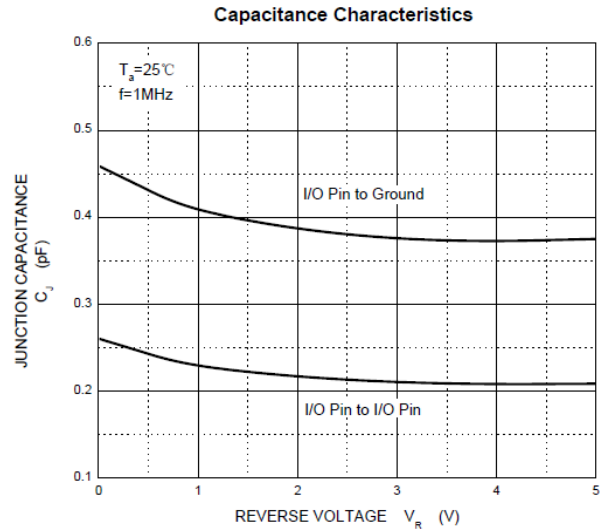
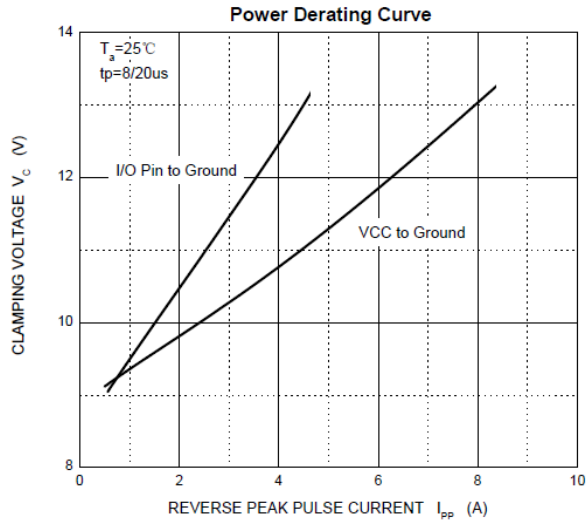
Parameter	Symbol
Peak Pulse Current	I_{PP}
Clamping Voltage @ I_{PP}	V_C
Reverse Stand-Off Voltage	V_{RWM}
Reverse Leakage Current @ V_{RWM}	I_R
Breakdown Voltage @ I_T	V_{BR}
Test Current	I_T
Forward Voltage	V_F
Forward Current	I_F



TYPICAL CHARACTERISTICS

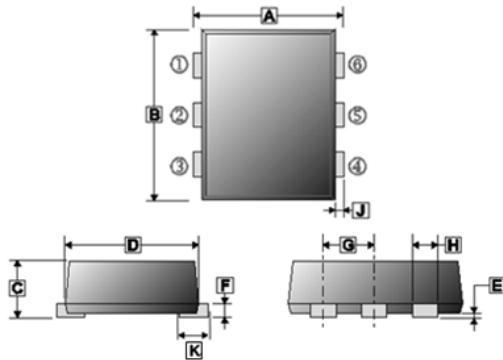


TYPICAL CHARACTERISTICS



PACKAGE OUTLINE DIMENSIONS

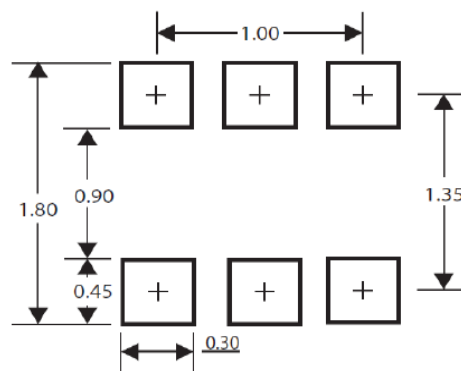
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REF.	Millimeter	
	Min.	Max.
A	1.50	1.70
B	1.50	1.70
C	0.525	0.60
D	1.10	1.30
E	-	0.05
F	0.09	0.16
G	0.45	0.55
H	0.17	0.27
J	0.10	0.30
K	0.20	0.40

MOUNTING PAD LAYOUT

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*Dimensions in millimeters