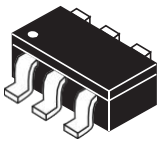
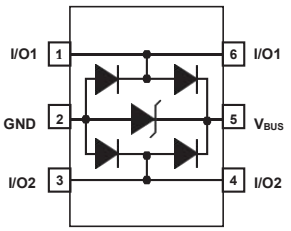
Features

Ultra low leakage: nA level
Operating voltage: 5V
Low clamping voltage
Complies with following standards:
– IEC 61000-4-2 (ESD) immunity test
Air discharge: ±30kV
Contact discharge: ±30kV
– IEC61000-4-4 (EFT) 40A (5/50ns)
–IEC61000-4-5 (Lightning) 6A (8/20μs)
RoHS Compliant



SOT23-6L
KNUSBLC6-2SC6



Applications

USB 2.0 interface
10/100 Ethernet
Personal digital assistants (PDA's)
Notebooks, Desktops and Servers
Portable instrumentation
Digital cameras

Mechanical Characteristics

Package: SOT23-6 Lead
Finish: Matte Tin
UL Flammability Classification Rating 94V-0
Pb-Free, Halogen Free, RoHS/WEEE Compliant

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	150	W
Peak Pulse Current (8/20μs)	Ipp	6	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	VESD	±30 ±30	kV
Operating Temperature Range	TJ	−55 to +125	°C
Storage Temperature Range	Tstg	−55 to +150	°C

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse stand-off voltage	V_{RWM}				5	V
Reverse breakdown voltage	V_{BR}	I_{BR}=1mA	6		9	V
Reverse leakage current	I_R	V_R=5V			0.1	μA
Clamping voltage (tp=8/20μs)	V_C	I_{PP}=1A			10	V
Clamping voltage (tp=8/20μs)	V_C	I_{PP}=6A			15	V
Junction capacitance	C_J	0Vdc,f=1MHz Between I/O pins and GND		0.8	1	pF
	C_J	0Vdc,f=1MHz I/O to I/O		0.35	0.4	pF

Typical Characteristics

Fig1. 8/20μs Pulse Waveform

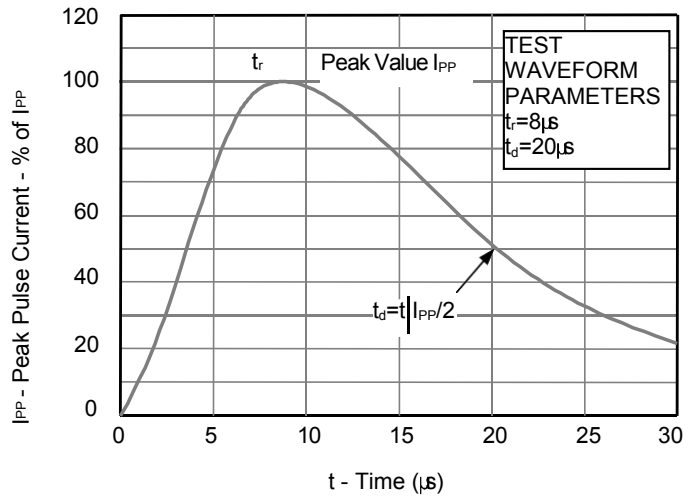


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

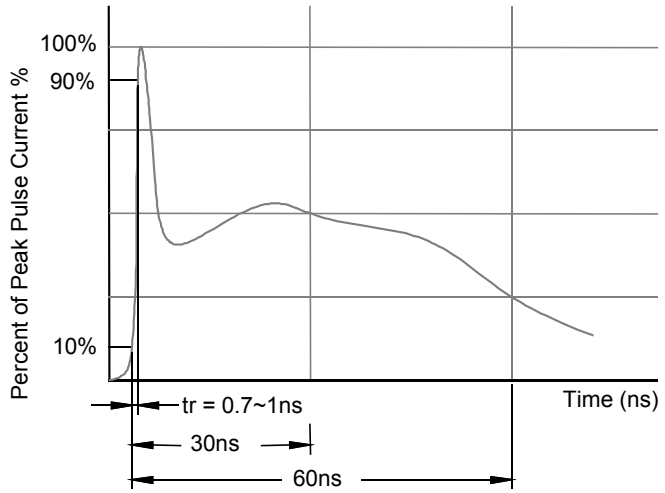
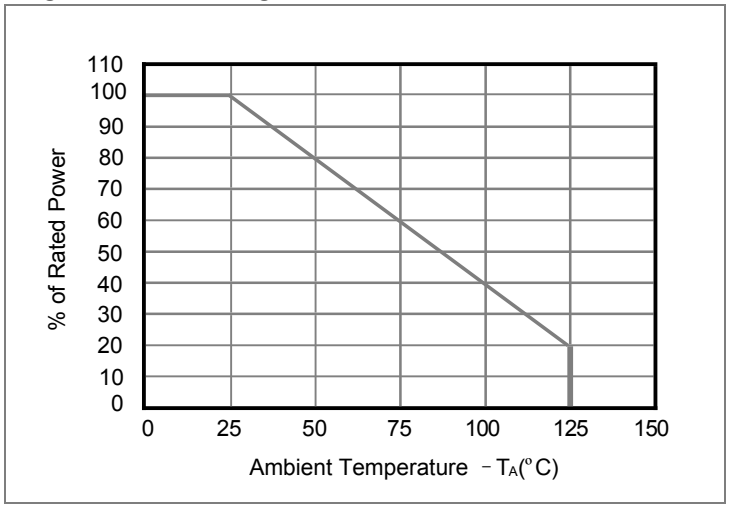
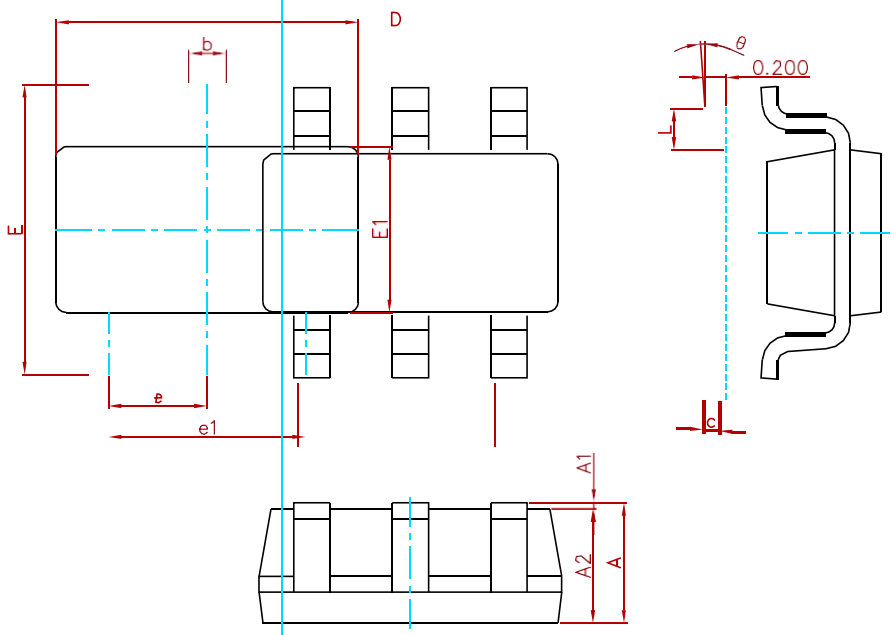


Fig3. Power Derating Curve

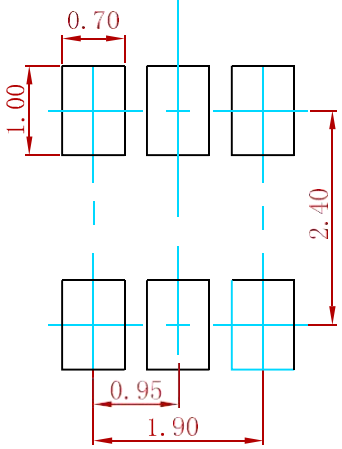


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
KNUSBLC6-2SC6	SOT-23-6	3000