UMW UBT26A05L03

Low Capacitance 2-Line ESD Protection

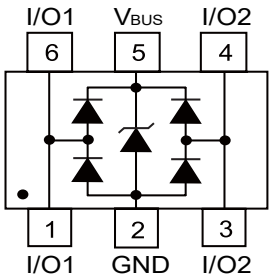
1.Description

UBT26A05L03 is designed to protect high speed data interfaces.It has been specifically designed to protect sensitive components which is connected to data and transmission lines from overvoltage caused by electrostatic discharge (ESD), electrical fast transients(EFT), and lightning.Low Capacitance 2-Line ESD ProtectionUMW UBT26A05L03www.u

2.Features

- SOT23-6L surface mount package
- Protects three data lines
- Working voltage: 5V
- Low leakage current
- Low clamping voltage
- Solid-state silicon avalanche technology
- Lead Free/RoHS compliant
- Solder reflow temperature: Pure Tin-Sn 260~270°C

3.Pinning information



SOT23-6

4.Absolute Maximum Ratings T_A= 25°C

Parameter	Symbol	Value	Units
Peak pulse current (tp=8/20μs)	I_{pp}	5	A
ESD voltage (Contact discharge)	V_{ESD}	±8	kV
ESD voltage (Air discharge)		±15	kV
Storage temperature range	T_J, T_{STG}	-55 to 150	°C

5.Electrical Characteristic (T_A=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse stand-off voltage	V_{RWM}				5.25	V
Reverse breakdown voltage	V_{BR}	I_{BR}=1mA	6			V
Reverse leakage current	I_R	V_R=5.25V, Each I/O pin			1	μA
Clamping voltage (tp=8/20μs)	V_C	I_{PP}=1A			12	V
Clamping voltage (tp=8/20μs)	V_C	I_{PP}=5A			17	V
Off state junction capacitance	C_J	0Vdc,f=1MHz Between I/O pins and GND		3.5		pF

6.Typical characteristic

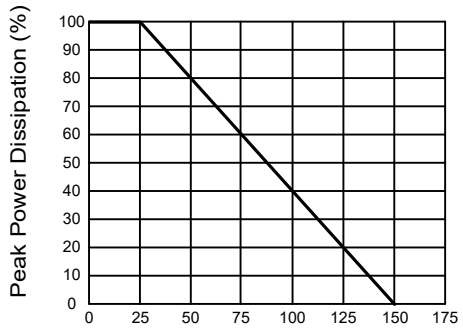


Figure 1: Power Derating Curve

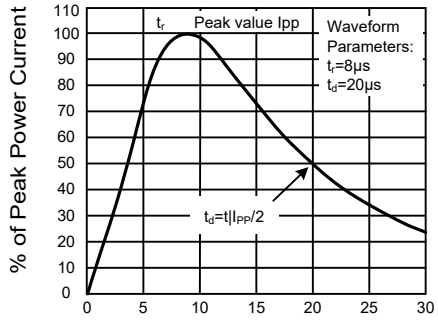


Figure 2: Pulse Waveforms

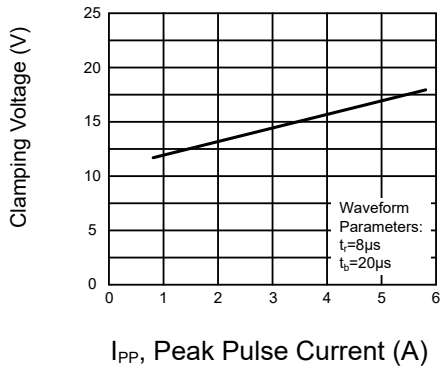


Figure 3: Clamping Voltage vs. Peak Pulse Current

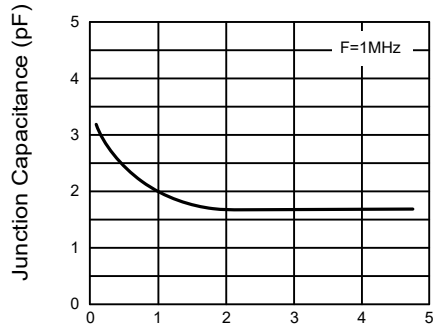
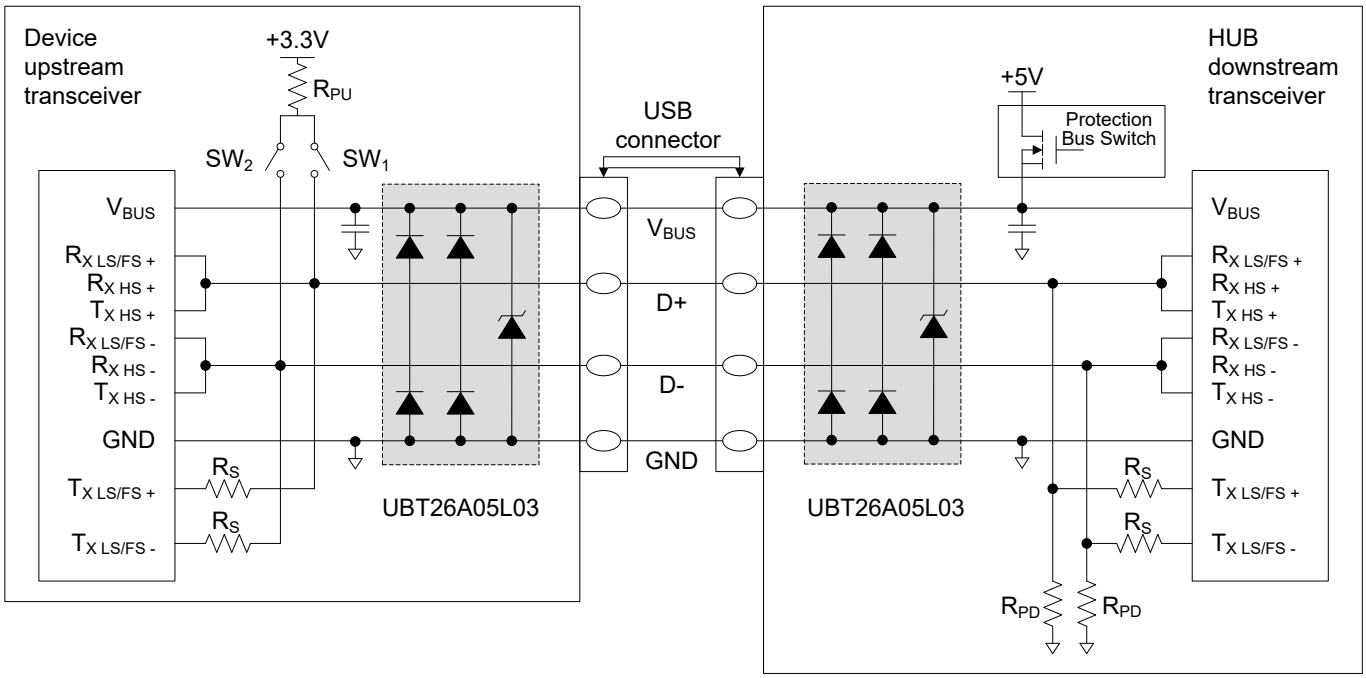


Figure 4: Normalized Capacitance vs. Reverse Voltage

7.Applications Information

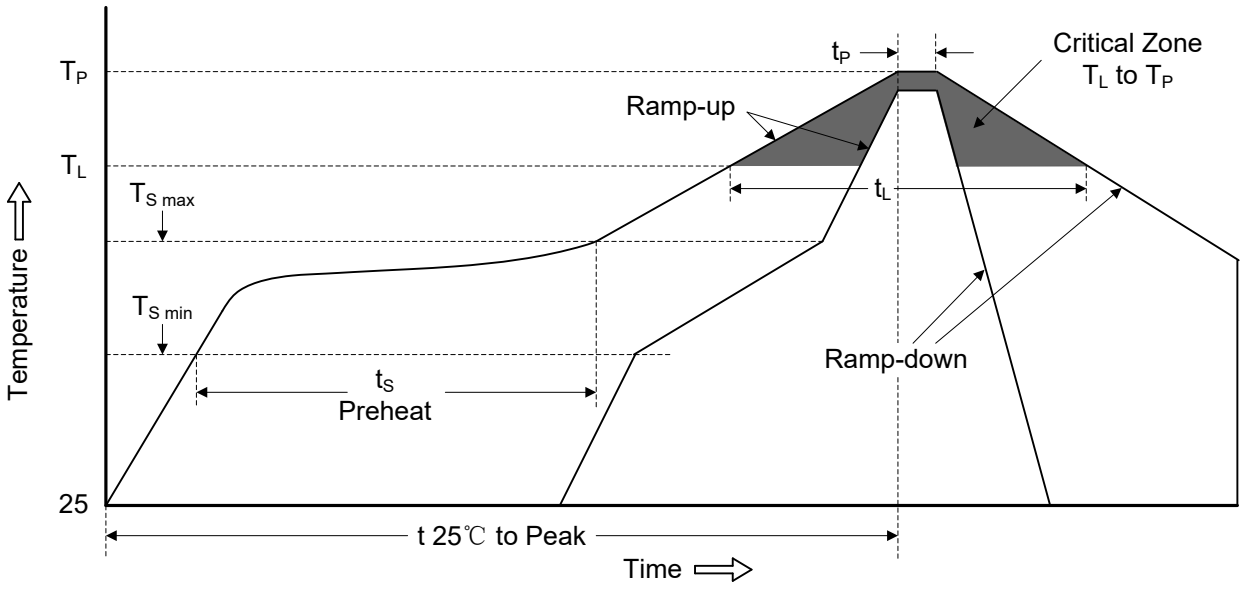
USB 2.0 port application diagram



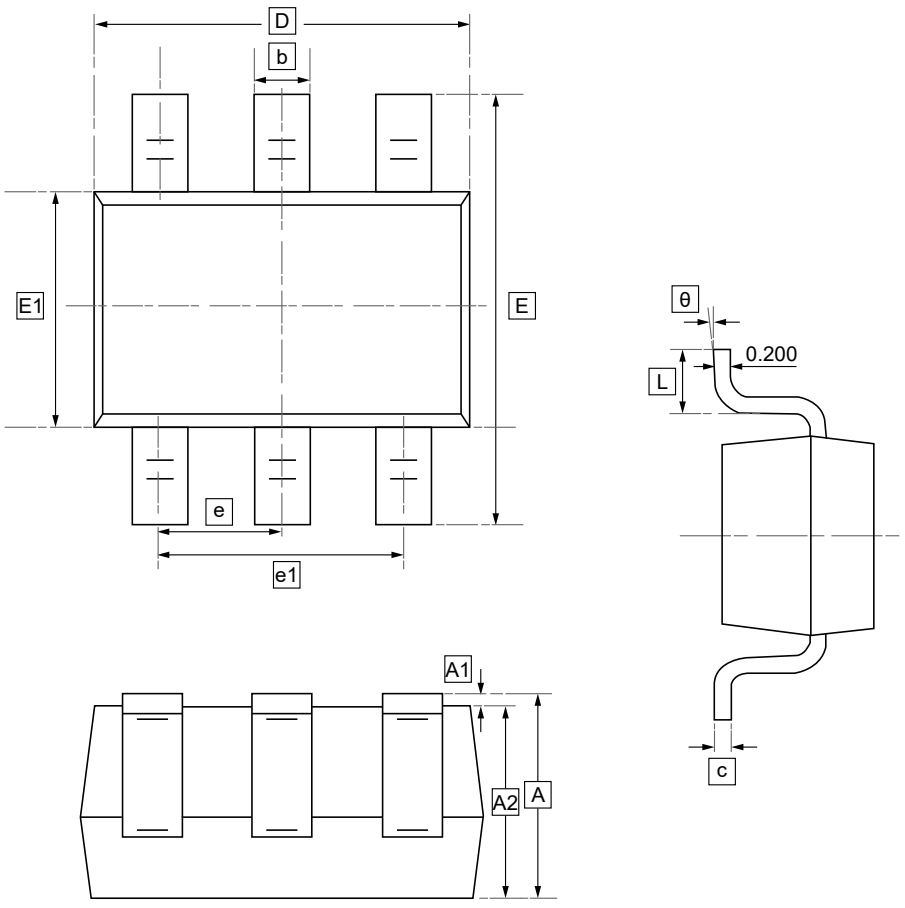
Mode	SW_1	SW_2
Low Speed LS	Open	Closed
Full Speed FS	Closed	Open
High Speed HS	Closed then open	Open

8.Soldering parameters

Profile Feature		Pb-Free Assembly
Average ramp-up rate (T_L to T_P)		3°C/second max.
Preheat	-Temperature Min ($T_{s(min)}$)	150°C
	-Temperature Max ($T_{s(max)}$)	200°C
	-Time (Min to Max) (ts)	60-180 secs.
T_{Smax} to T_L -Ramp-up Rate		3°C/sec. Max
Time maintained above:	-Temperature(T_L)	217°C
	-Time(T_L)	60-150 secs.
Peak Temperature (T_P)		+260°C
Time within 5°C of actual Peak Temp (T_p)		20-40 seconds
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temperature		8 min. Max



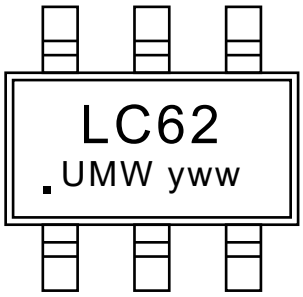
9.SOT-23-6 Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	A1	A2	b	c	D	E1	E	e	e1	L	θ
Min	1.050	0.000	1.050	0.300	0.100	2.820	1.500	2.650	0.950	1.800	0.300	0°
Max	1.250	0.100	1.150	0.500	0.200	3.020	1.700	2.950	BSC	2.000	0.600	8°

10.Ordering information



yww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW UBT26A05L03	SOT23-6	3000	Tape and reel

11.Disclaimer

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