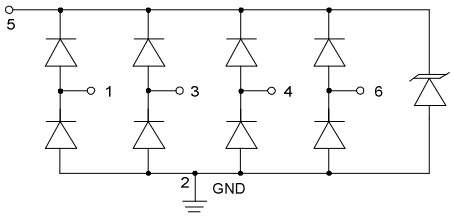
UCQ06A05L05

4-Line Low Capacitance TVS Diode Array

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: ±18kV
    - Contact discharge: ±15kV
  - – IEC61000-4-4 (EFT) 40A (5/50ns)
  - – IEC61000-4-5 (Lightning) 5A (8/20ns)
- RoHS Compliant

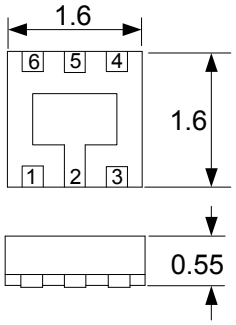
Dimensions DFN1616-6



Applications

- USB 2.0/3.1 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100/1000 Ethernet
- HDMI 1.3/1.4/2.0 interface

Pin Configuration



Mechanical Characteristics

- Package: DFN1616-6
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel:3,000pcs
- Reel Size:7 inch

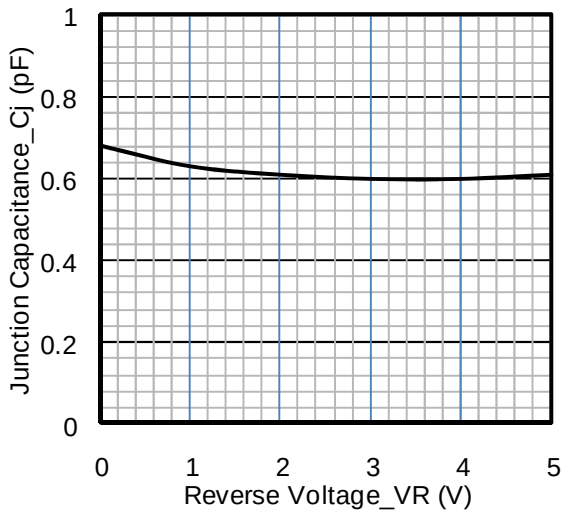
Absolute Maximum Ratings(Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppp	100	W
ESD per IEC 61000−4−2 (Air)	V_{ESD}	±18	Kv
ESD per IEC 61000−4−2 (Contact)		±15	
Operating Temperature Range	T_J	-55 to +125	℃
Storage Temperature Range	T_{STJ}	-55 to +150	℃

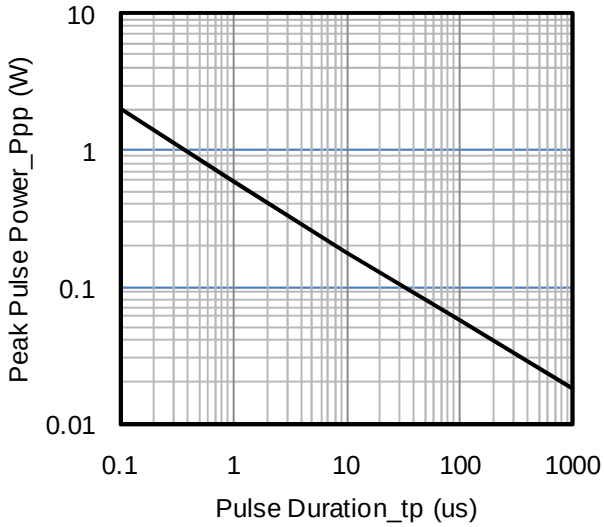
Electrical Characteristics(TA=25°C unless otherwise specified)

Part Number	Device Marking	V_{RWM} (V)	V_{BR} (V)	I_T (mA)	V_C @1A	Vc		I_R μA (Max)	C (Pf) (Typ.)
						(Max)	(@A)		
UCQ06A05L05	53P	5	6	1	10	20	5	0.5	0.4

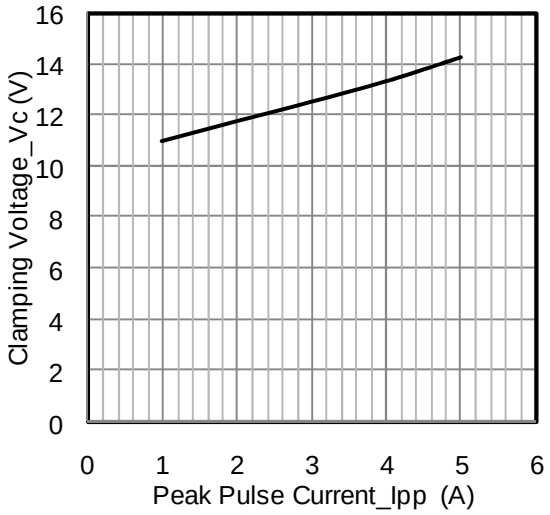
Typical Performance Characteristics (T_A=25°C unless otherwise Specified)



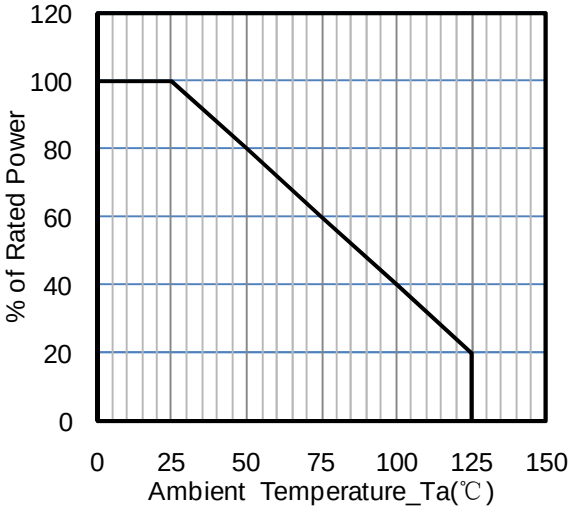
Junction Capacitance vs. Reverse Voltage



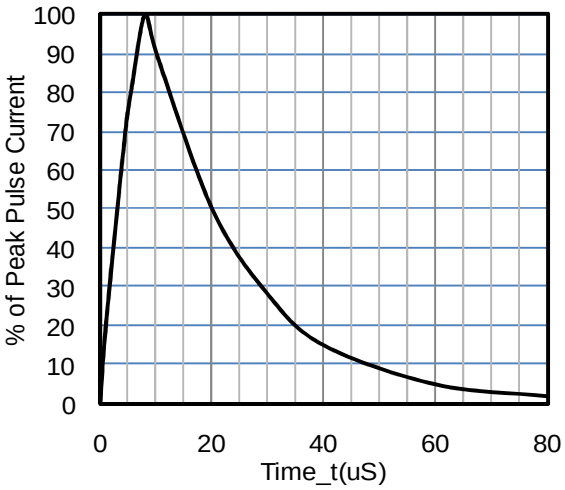
Peak Pulse Power vs. Pulse Time



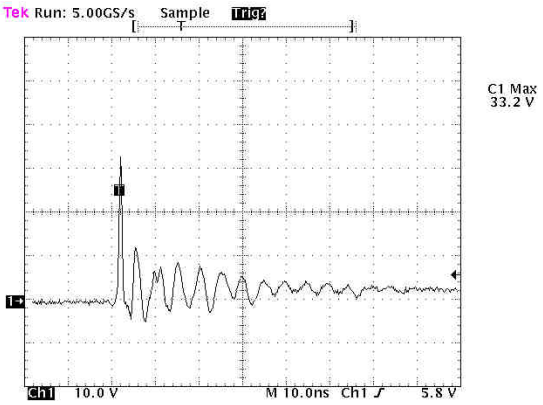
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



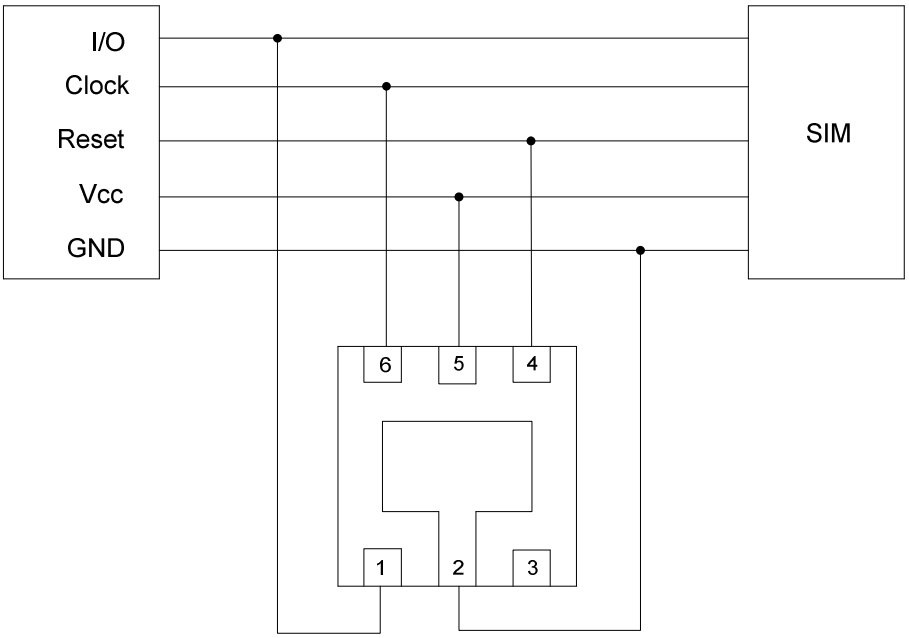
8 X 20us Pulse Waveform



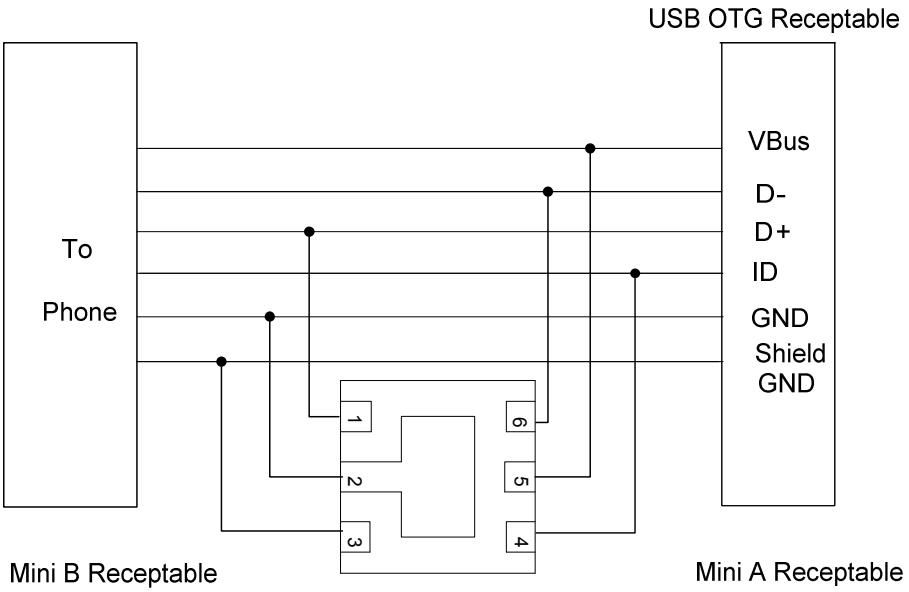
ESD Clamping Voltage

8 kV Contact per IEC61000−4−2

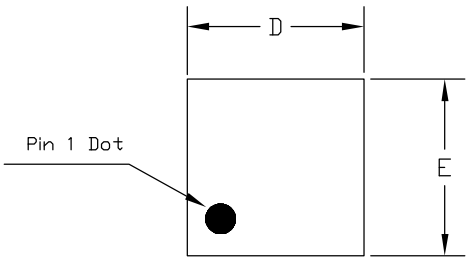
UCQ06A05L05 on SIM Port Application



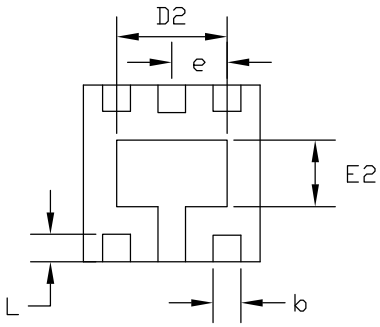
UCQ06A05L05 on USB OTG Application



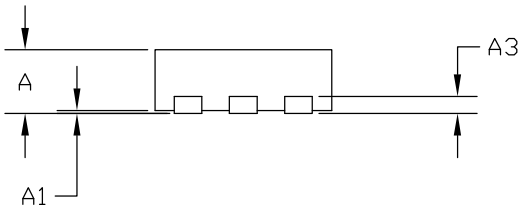
DFN1616-6 Package Outline Drawing



TOP VIEW



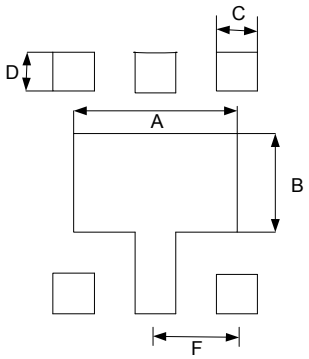
BOTTOM VIEW



SIDE VIEW

COMMON DIMENSIONS(MM)			
PKG.	UT: ULTRA THIN		
REF.	MIN.	NOM.	MAX
A	0.50	0.55	0.60
A1	0.00	–	0.05
A3	0.15 REF.		
D	1.55	1.60	1.65
E	1.55	1.60	1.65
D2	0.85	1.00	1.10
E2	0.45	0.60	0.70
L	0.20	0.25	0.30
b	0.20	0.25	0.30
e	0.50 BSC		

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
A	1.20	0.04
B	0.72	0.020
C	0.30	0.012
D	0.30	0.032
F	0.60	0.052

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