

2-Line Ultra Low Capacitance TVS Diode Array

Features

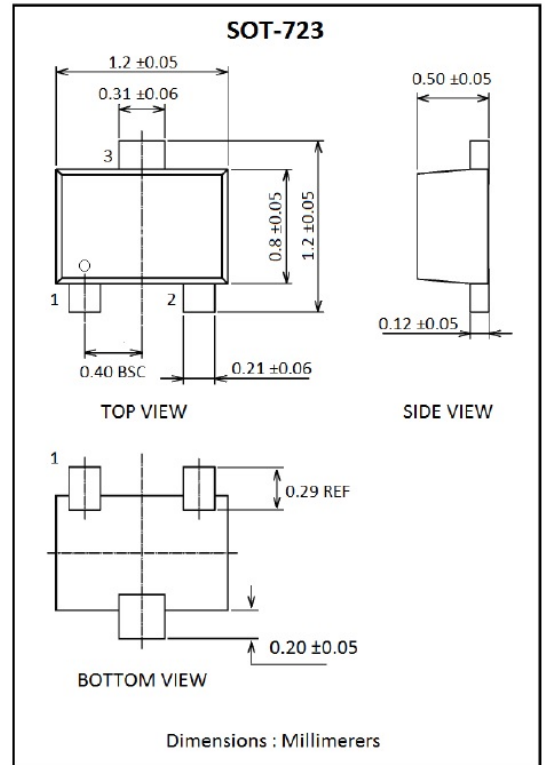
- IEC 61000-4-2 (ESD) $\pm 17\text{kV}$ (air), $\pm 10\text{kV}$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4A (8/20 μs)
- 100 Watts Peak Pulse Power per Line ($t_p=8/20\mu\text{s}$)
- Low leakage current
- Low clamping voltage
- Operating voltage: 5V
- Protects Two Lines

Applications

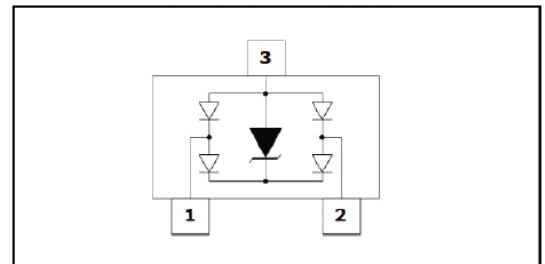
- Cellular Handsets & Accessories
- High Speed I/O Lines
- Keypads, Side Keys, LCD Displays
- Battery, Power Lines
- Notebooks & Desktop Computers
- USB 2.0

Mechanical Characteristics

- Package: SOT-723
- Molding Compound Flammability Rating : UL 94V-O
- Moisture Sensitivity: Level 1 per J-STD-020
- Lead Finish : Lead Free
- Material: RoHS compliant



Circuit and Pin Schematic



Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PP}	100	W
Peak Pulse Current ($t_p = 8/20\mu\text{s}$)	I_{PP}	4	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 17	KV
ESD per IEC 61000-4-2 (Contact)		± 10	KV
Operating Temperature Range	T_J	-40 to 125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to 150	$^\circ\text{C}$

Electrical Parameters (T _A = 25°C Unless otherwise noted)	
Symbol	Parameter
I _{PP}	Reverse Peak Pulse Current
V _C	Clamping Voltage @ I _{PP}
V _{RWM}	Reverse Stand-Off Voltage
I _R	Reverse Leakage Current @ V _{RWM}
V _{BR}	Breakdown Voltage @ I _T
I _T	Test Current
I _F	Forward Current
V _F	Forward Voltage @ I _F

Electrical Characteristics (T _A = 25°C Unless otherwise noted)						
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Reverse Stand-Off Voltage	V _{RWM}				5	V
Reverse breakdown Voltage	V _{BR}	I _T = 1mA	6			V
Reverse leakage current	I _R	V _{RWM} = 5V			1	μA
Clamping Voltage	V _C	I _{PP} = 1A (tp = 8/20μs)			12	V
Clamping Voltage	V _C	I _{PP} = 4A (tp = 8/20μs)			25	V
Junction capacitance	C _J	V _R = 0V, f = 1MHz		0.3		pF

Typical Performance Characteristics ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

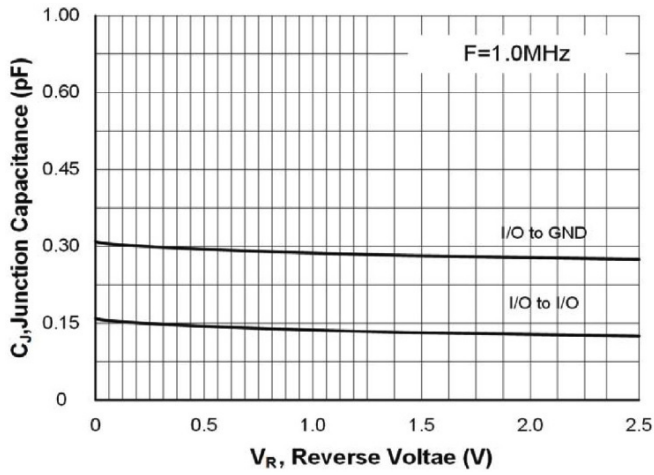


Fig 1. Junction Capacitance vs. Reverse Voltage

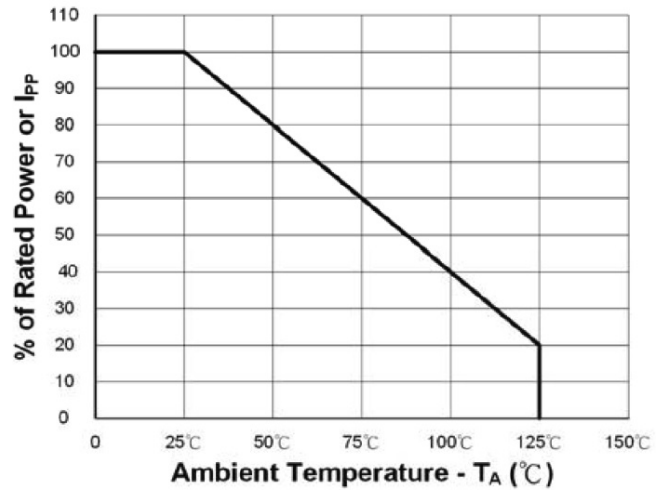


Fig 2. Power Derating Curve

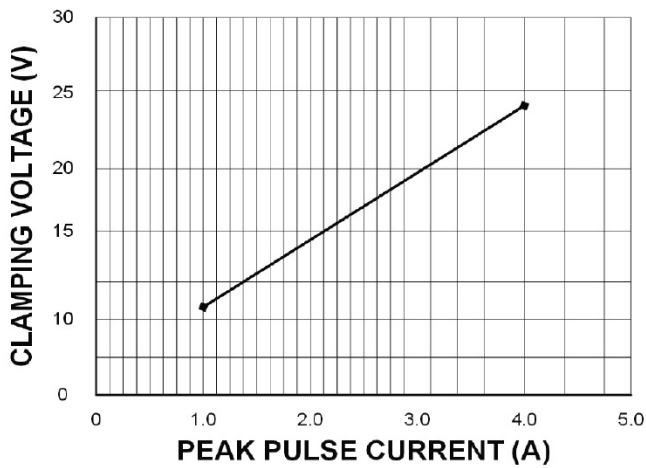


Fig 3. Clamping Voltage vs. Peak Pulse Current

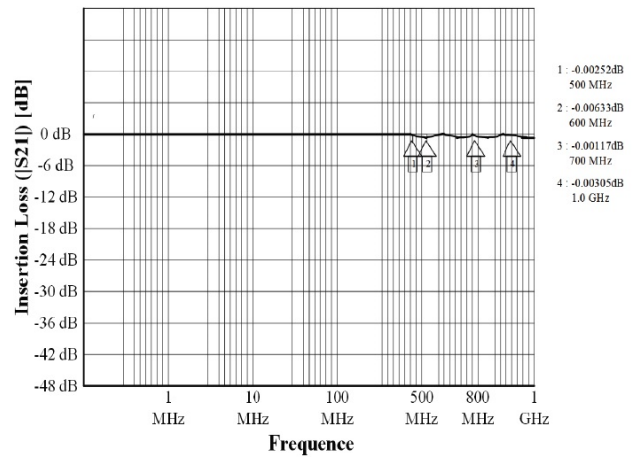


Fig 4. Insertion Loss (S21)

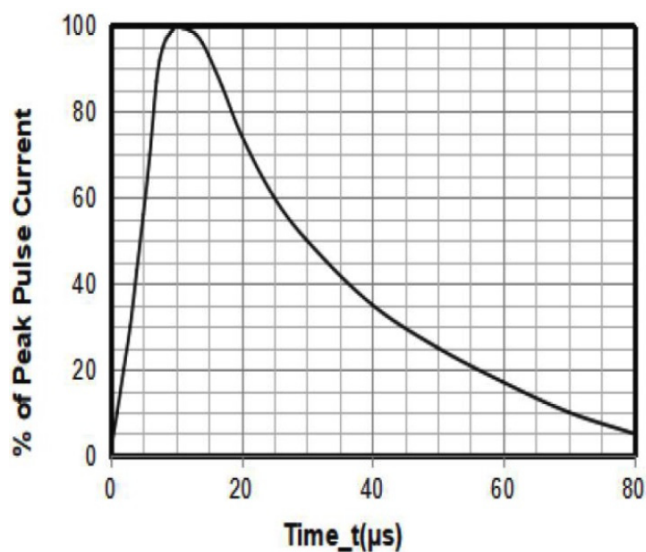
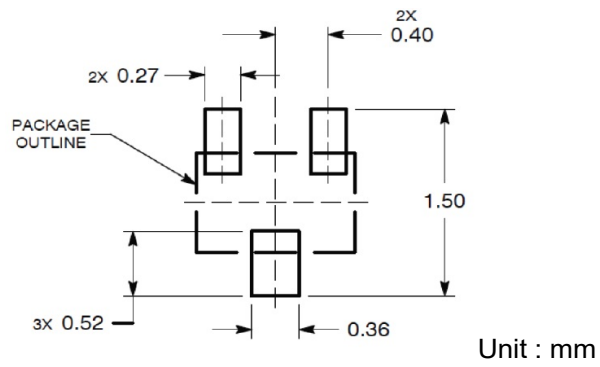


Fig 5. 8/20 μs Pulse Waveform

Suggested PAD Layout



Ordering information

Part Number	Marking Code	Package	Base qty	Reel Size	Delivery mode
			(pcs)	(inch)	
SC05C2UTM	M5	SOT-723	8,000	7	Tape and reel