

Descriptions

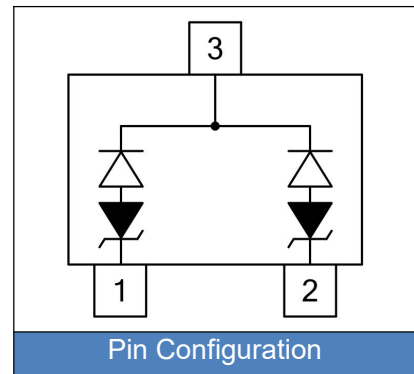
This is ultra low capacitance TVS arrays designed to protect high speed data interfaces. It has been specifically designed to protect sensitive components which is connected to high-speed data and transmission lines from overvoltage caused by electrostatic (ESD), cable discharge events (CDE) and electrical fast transients (EFT).



Features

- ◆ IEC61000-4-2 ESD 30KV Air,30KV contact compliance
- ◆ SOT-23 surface mount package
- ◆ Protects two high speed data lines
- ◆ Working voltage: 5V
- ◆ Low leakage current
- ◆ Ultra low capacitance and clamping voltage
- ◆ Solid-state silicon avalanche technology
- ◆ Lead Free/RoHS compliant
- ◆ Solder reflow temperature: Pure Tin-Sn, 260~270℃
- ◆ Flammability rating UL 94V-0
- ◆ Meets MSL level 1, per J-STD-020

Schematic



Applications

- ◆ HDMI interface protection
- ◆ Mobile display digital interface
- ◆ RF/Antenna circuits
- ◆ USB 2.0 & Firewire ports
- ◆ GaAs photodetector protection
- ◆ HBT power Amp protection
- ◆ Infiniband transceiver protection

Dimensions (SOT-23)

Symbol	Dimension			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.08	0.18	0.003	0.007
B	0.15	-	0.006	-
C	-	0.13	-	0.005
D	0.89	1.09	0.035	0.043
E	2.80	3.05	0.110	0.120
F	1.90		0.075	
G	0.95		0.037	
H	1.19	1.40	0.047	0.055
I	2.10	2.49	0.083	0.098
J	0.35	0.50	0.014	0.020

Recommended Soldering Pad Layout

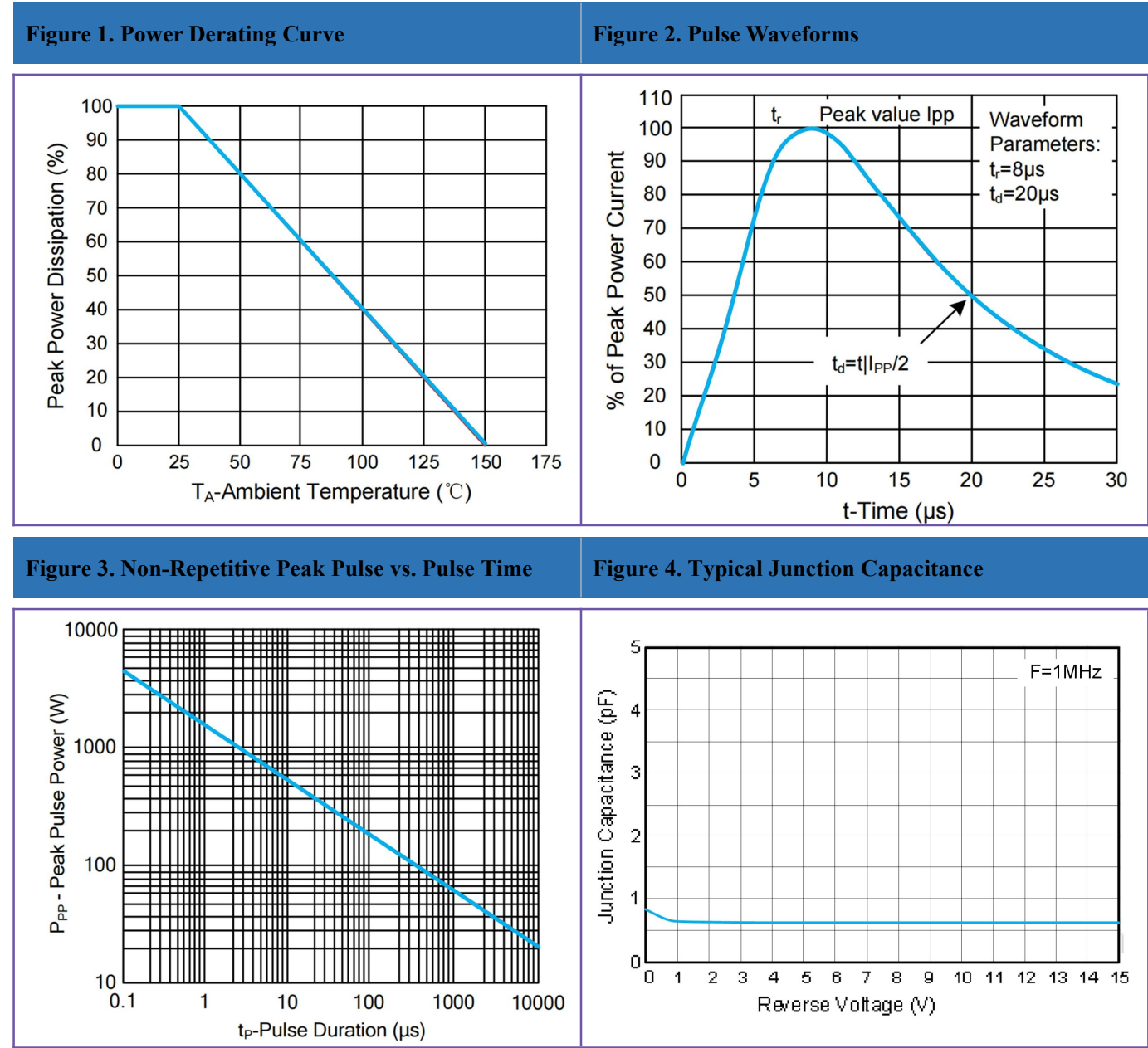
Maximum Ratings and Electrical Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
Peak pulse power ($t_p=8/20\ \mu\text{s}$ waveform)	P_{PP}	400	W
ESD voltage (Contact discharge)	V_{ESD}	± 30	kV
ESD voltage (Air discharge)		± 30	
Storage & operating temperature range	T_{STG}, T_J	$-55\sim+150$	$^{\circ}\text{C}$

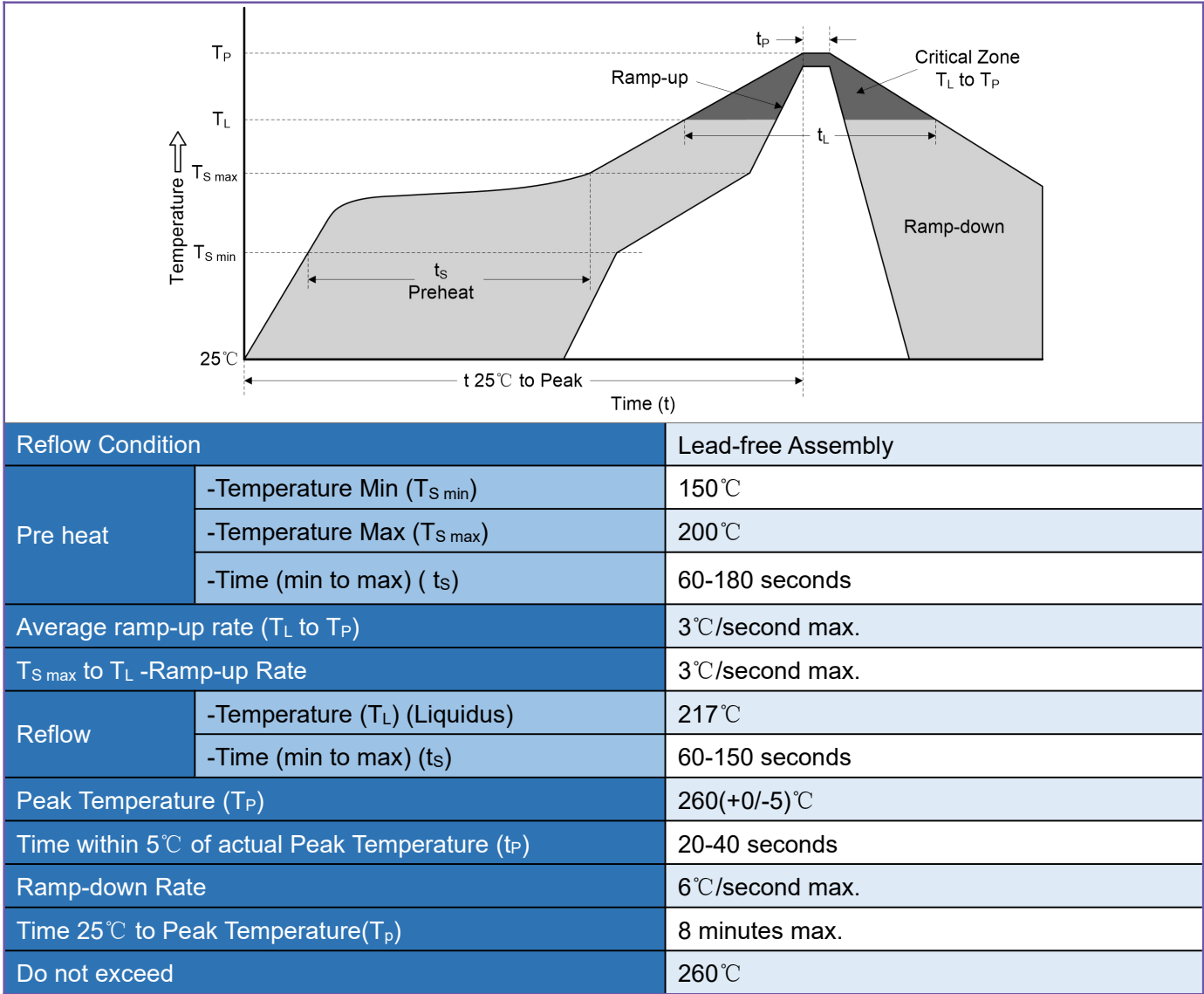
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Reverse stand-off voltage	V_{RWM}	-	-	-	5	V
Reverse breakdown voltage	V_{BR}	$I_{BR}=1\text{mA}$	6	-	-	V
Reverse leakage current	I_R	$V_R=5\text{V}$ Each I/O pin	-	-	5	μA
Clamping voltage ($t_p=8/20\mu\text{s}$)	V_C	$I_{PP}=1\text{A}$	-	-	12	V
Peak pulse current ($t_p=8/20\mu\text{s}$)	I_{PP}	-	-	-	17	A
Off state junction capacitance	C_J	0Vdc, $f=1\text{MHz}$ Between I/O pins and GND	-	0.8	-	pF

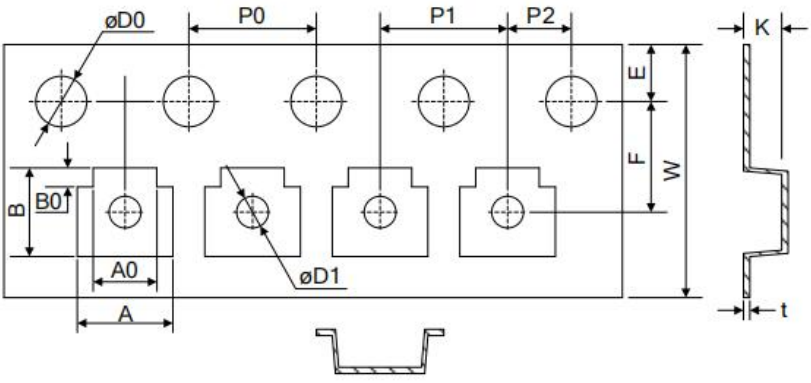
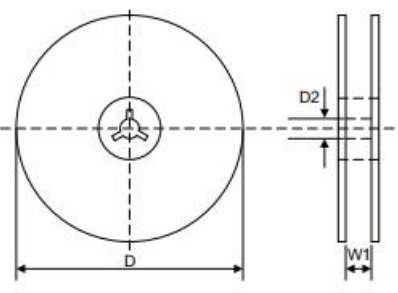
Ratings and Characteristic Curves (T_A=25°C unless otherwise noted)



Reflow Soldering Parameters



Packaging

Tape		Symbol	Dimension (mm)
		W	8.00±0.30
Reel		P0	4.00±0.10
		P1	4.00±0.10
		P2	2.00±0.10
		D0	Φ1.55±0.10
		D1	Φ1.00±0.05
		E	1.75±0.10
		F	3.50±0.10
		A	3.10±0.10
		A0	2.10±0.10
		B	2.75±0.10
		B0	0.65±0.10
		K	1.10±0.10
		t	0.20±0.05
		D	Φ178.0±2.0
		D2	Φ13.0
		W	9.5
		Quantity: 3000PCS	