

Descriptions

TVS Array in a SOT23 Plastic Package.

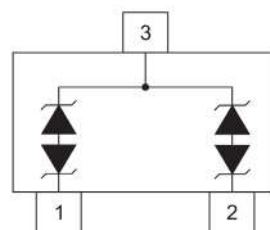
Features

Small package, Response Time is Typically <1 ns,
ESD >30 kV per Human Body Model,
IEC61000-4-2 Level 4 ESD Protection, HF Product.

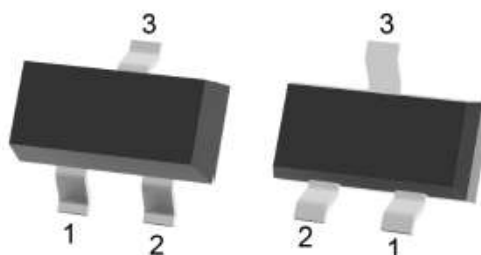
Applications

ESD protection for high-speed data lines, such as USB 2.0,
set-top boxes, monitors and so on. According to IEC 61000-4-2 (ESD)
Standard: $\pm 30\text{kV}$ (air discharge), $\pm 30\text{kV}$ (contact discharge).

Equivalent Circuit



Pinning



PIN: See Equivalent Circuit.

Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Peak Pulse Power (tp = 8/20μs)	P _{PP}	350	W
Peak Pulse Current (tp = 8/20μs)	I _{PP}	8.0	A
ESD per IEC 61000-4-2 (Air)	V _{ESD1}	±30	kV
ESD per IEC 61000-4-2 (Contact)	V _{ESD2}	±30	kV
Operating Temperature	T _{OPR}	-55 to +150	°C
Storage Temperature	T _{STG}	-55 to +150	°C

Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Stand-Off Voltage	V _{RWM}				24	V
Reverse Breakdown Voltage	V _{BR}	I _t =1mA	26.7			V
Reverse Leakage Current	I _R	V _{RWM} =24V T=25°C			1	μA
Clamping Voltage	V _C	I _{PP} = 1.0A t _p =8/20μS			33	V
	V _C	I _{PP} = 8.0A t _p =8/20μS			44	V
Capacitance. Any I/O pin to GND	C _J	V _R =0V f=1MHz		25	30	pF

Electrical Characteristic Curve

Fig.1 Non-Repetitive Pulse Power vs.Pulse Time

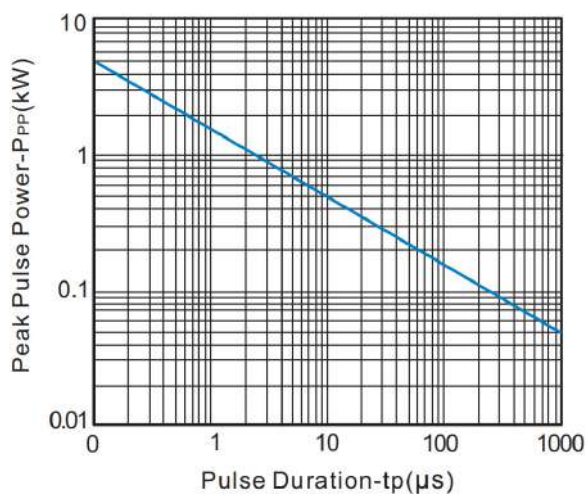
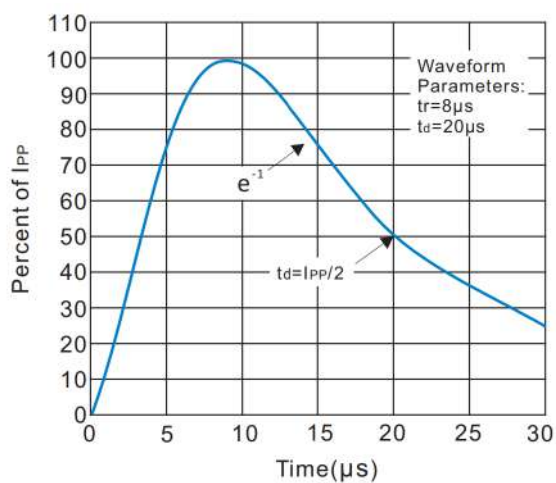
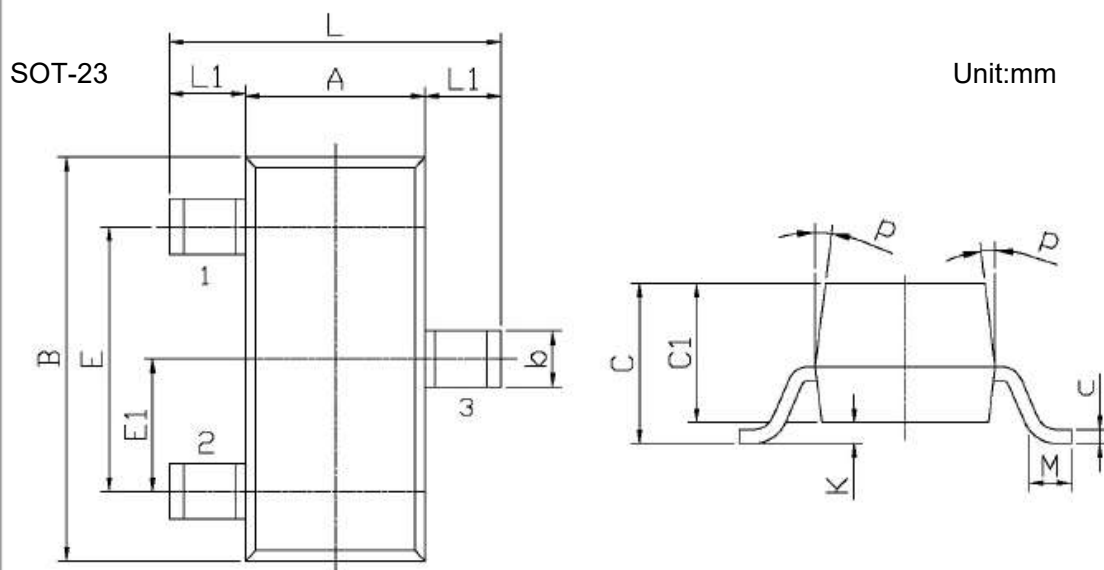


Fig.2 Pulse Waveform

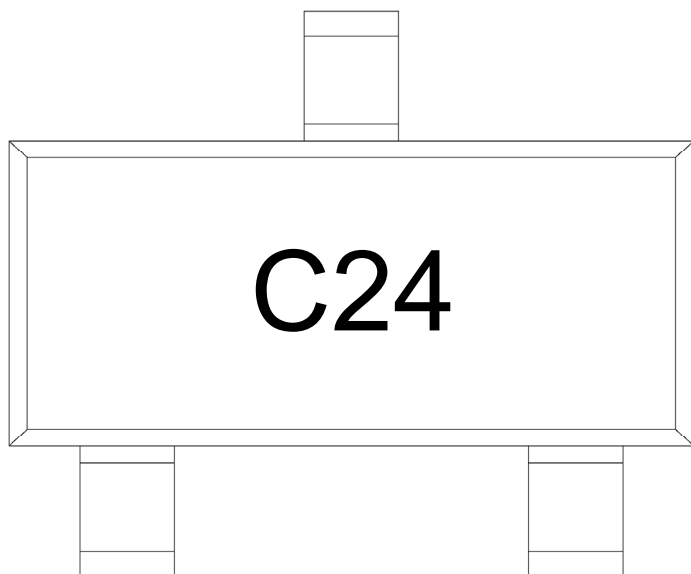


Package Dimensions



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
B	2.70	3.10	K	0	0.10
E	1.70	2.10	M	0.20MIN	
E1	0.85	1.05	P	7°	
b	0.35	0.55			

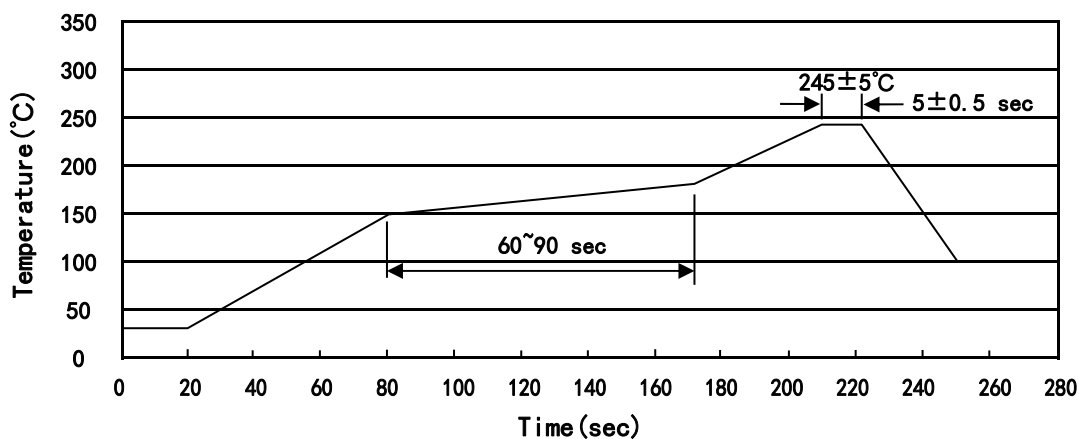
Marking Instructions



Note:

C24: Product Type Code

Temperature Profile for IR Reflow Soldering(Pb-Free)



Resistance to Soldering Heat Test Conditions

Temp.: 260±5°C

Time: 10±1 sec

Note:

1. Preheating: 150~180°C, Time: 60~90sec.
2. Peak Temp.: 245±5°C, Duration: 5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

Packaging SPEC.

Package Type	Units					Dimension (unit : mm3)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT-23	3,000	10	30,000	6	180,000	7" ×8	180×120×180	390×385×205