

Descriptions

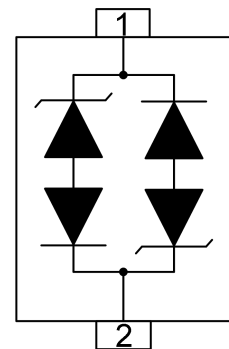
The UP3.5P323 Series is so ultra low capacitance, low leakage current, insertion loss in a miniature SOD-323 package that designed to protect voltage sensitive components of high frequency line from over-voltage caused by ESD, EFT. The Transient Voltage Suppressor Array series offers a choice of voltage types ranging from 3 V to 24 V in a Bi-directional configuration. The devices will meet IEC 61000-4-2 (ESD), IEC 61000-4-4 (EFT) and IEC 61000-4-5 (Surge) requirements..



Features

- ◆ 350W Peak power dissipation under 8/20 μ s waveform
- ◆ IEC 61000-4-2 (ESD): Air 30KV, Contact 30KV
- ◆ IEC 61000-4-4 (EFT): 40A - 5/50ns
- ◆ SOD-323 surface mount package
- ◆ Ultra low capacitance: 1.0PF typical
- ◆ Protects one Bi-directional line
- ◆ Response time < 1ns
- ◆ Reverse stand-off voltage is From 3V to 24V
- ◆ Lower leakage current
- ◆ Excellent clamping voltages
- ◆ Solid-state silicon avalanche technology
- ◆ Solder reflow temperature: Pure Tin-Sn, 260-270°C
- ◆ Plastic package has underwriters laboratory flammability 94V-0
- ◆ Meet Lead Free/RoHS compliant

Schematic



Applications

- ◆ Cellular Handsets and Accessories
- ◆ Personal Digital Assistants (PDA's)
- ◆ Notebooks & Handhelds
- ◆ Portable Instrumentation
- ◆ RJ45、USB、VGA、DVI、SDI

Dimensions (SOD-323)

Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.80	1.10	0.031	0.043
A1	0.00	0.20	0.000	0.008
b	0.25	0.40	0.010	0.016
C	0.00	0.15	0.000	0.006
D	1.60	1.80	0.063	0.071
E	1.15	1.45	0.045	0.057
HE	2.30	2.80	0.091	0.110
L	-	0.40	-	0.016

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

Rating	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PPM}	350	W
ESD voltage (Contact discharge)	V_{ESD}	± 30	KV
ESD voltage (Air discharge)		± 30	
Operating junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^{\circ}\text{C}$

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

Part Number	Reverse Stand-Off Voltage	Breakdown Voltage @ I_T	Test Current	Maximum Clamping Voltage @ I_{PP}	Peak Pulse Current	Reverse Leakage @ V_{RWM}	Capacitance At 1MHZ 0V
	$V_{RWM}(V)$	$V_{BR}(V)\text{min}$	$I_T(\text{mA})$	$V_C(V)$	$I_{PP}(A)$	$I_R(\mu A)$	$C_j(\text{PF})$
UP3.5P323C03P01	3.3	4.0	1	15	19	20	1
UP3.5P323C05P01	5.0	6.0	1	18.3	17	5	1
UP3.5P323C08P01	8	8.5	1	24	10	1	1
UP3.5P323C12P01	12	13.3	1	28.6	7	1	1
UP3.5P323C15P01	15	16.7	1	35	5	1	1
UP3.5P323C24P01	24	26.7	1	56	3	1	1

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

Figure 1. Peak Pulse Power Rating Curve

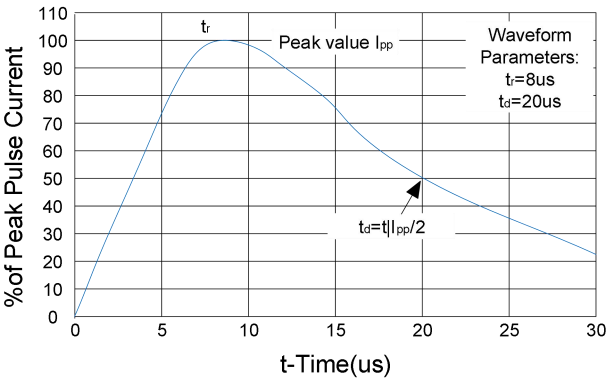


Figure 2. Pulse Derating Curve

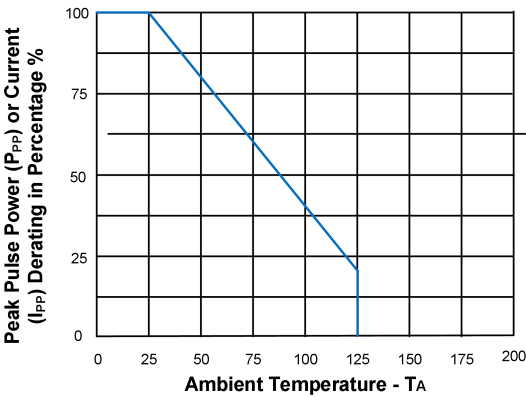


Figure 3. Typical Junction Capacitance

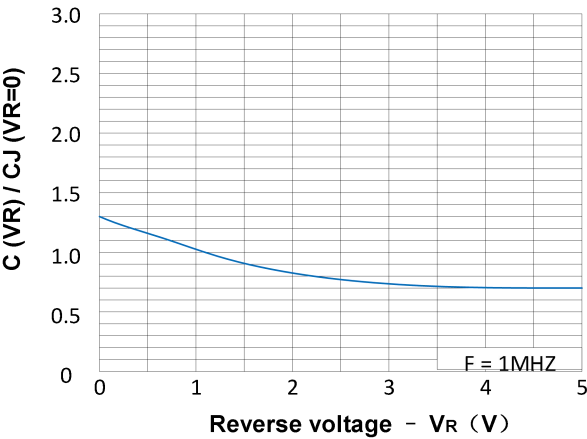
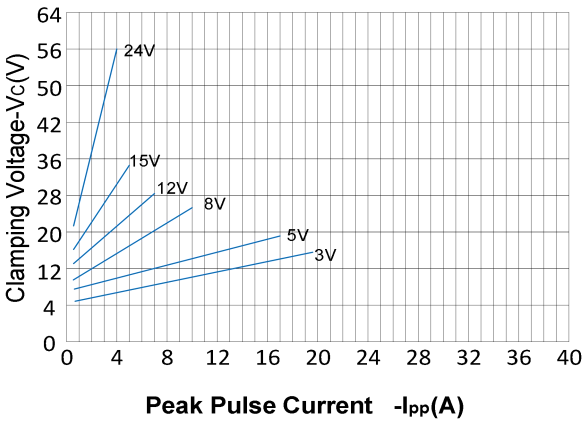
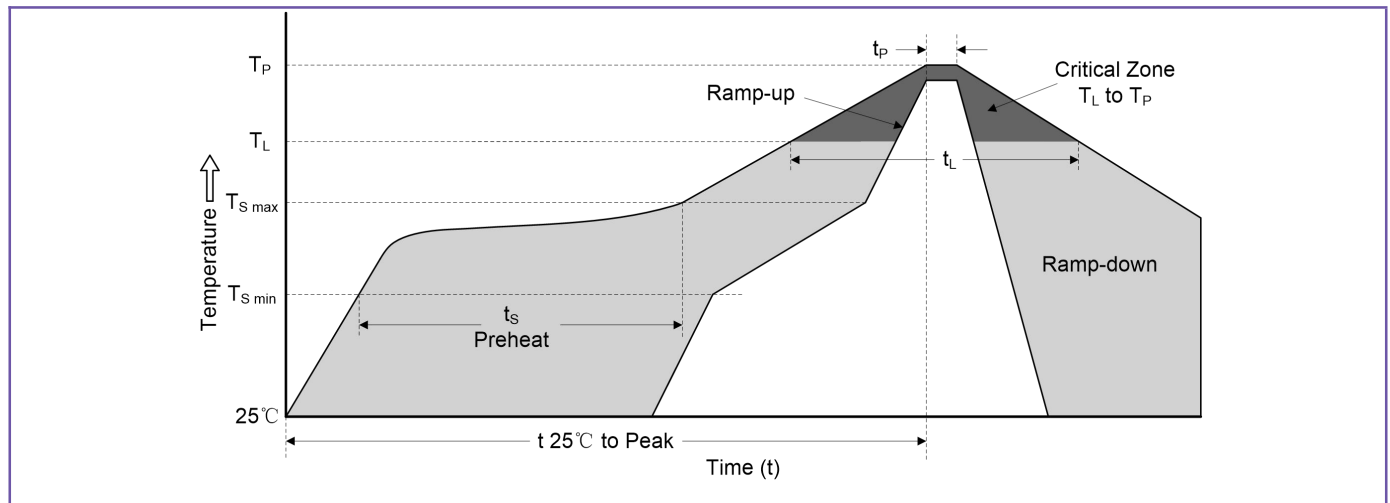


Figure 4. Clamping Voltage Vs Peak Pulse Current



Reflow Soldering Parameters



Reflow Condition		Lead-free Assembly
Pre heat	-Temperature Min ($T_{S\min}$)	150°C
	-Temperature Max ($T_{S\max}$)	200°C
	-Time (min to max) (t_s)	60-180 seconds
Average ramp-up rate (T_L to T_P)		3°C/second max.
$T_{S\max}$ to T_L -Ramp-up Rate		3°C/second max.
Reflow	-Temperature (T_L) (Liquidus)	217°C
	-Time (min to max) (t_s)	60-150 seconds
Peak Temperature (T_P)		260(+0/-5)°C
Time within 5°C of actual Peak Temperature (t_p)		20-40 seconds
Ramp-down Rate		6°C/second max.
Time 25°C to Peak Temperature(T_P)		8 minutes max.
Do not exceed		260°C

Package

Part number	QTY/Reel	Reel Size
UP3.5P323CXXP01 Series	3000PCS	7Inch