



LP2.5PT23C15P02

Transient Voltage Suppressors Array

Descriptions

LP2.5PT23C15P02 in a small SOT-23 Surface-Mounted Device (SMD) plastic package designed to protect two lines from the damage caused by Electro Static Discharge (ESD) and other transients.

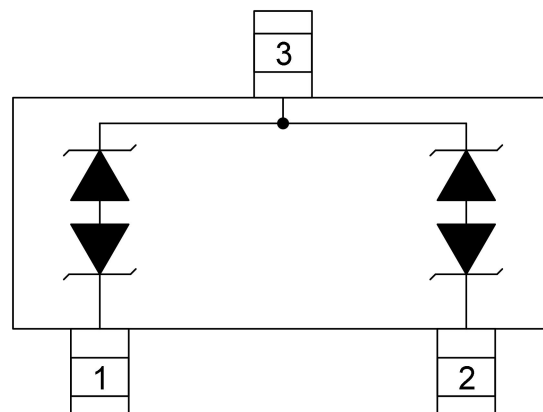
Features

- ◆ Max. peak pulse power: $P_{PPM} = 250 \text{ W}$ at $t_p = 8/20\mu\text{s}$
- ◆ IEC61000-4-5 (surge): 10A (8/20 μs)
- ◆ IEC61000-4-2 ESD 15KV Air, 8KV contact compliance, ESD protection up to 30 kV
- ◆ IEC61000-4-4 EFT 2KV/40A (5/50 ns)
- ◆ Protects two Bi-directional line
- ◆ Response time < 1ns
- ◆ Working voltage is 15V
- ◆ Lower leakage current
- ◆ Excellent clamping voltages
- ◆ Solid-state silicon avalanche technology
- ◆ Solder reflow temperature Tin-Sn, 260-270°C
- ◆ Plastic package has underwriters laboratory flammability 94V-0
- ◆ Meet Lead Free/RoHS compliant

Applications

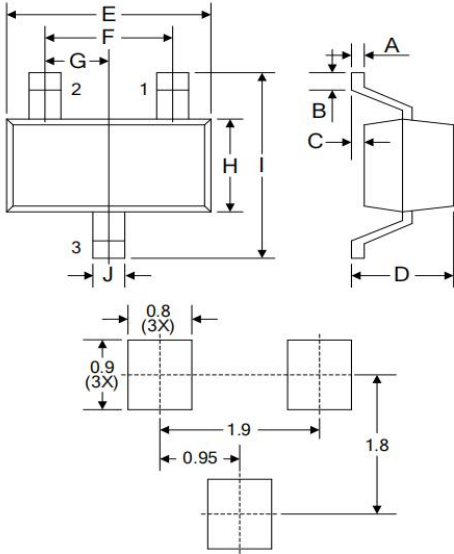
- ◆ RS422
- ◆ STB

Schematic



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



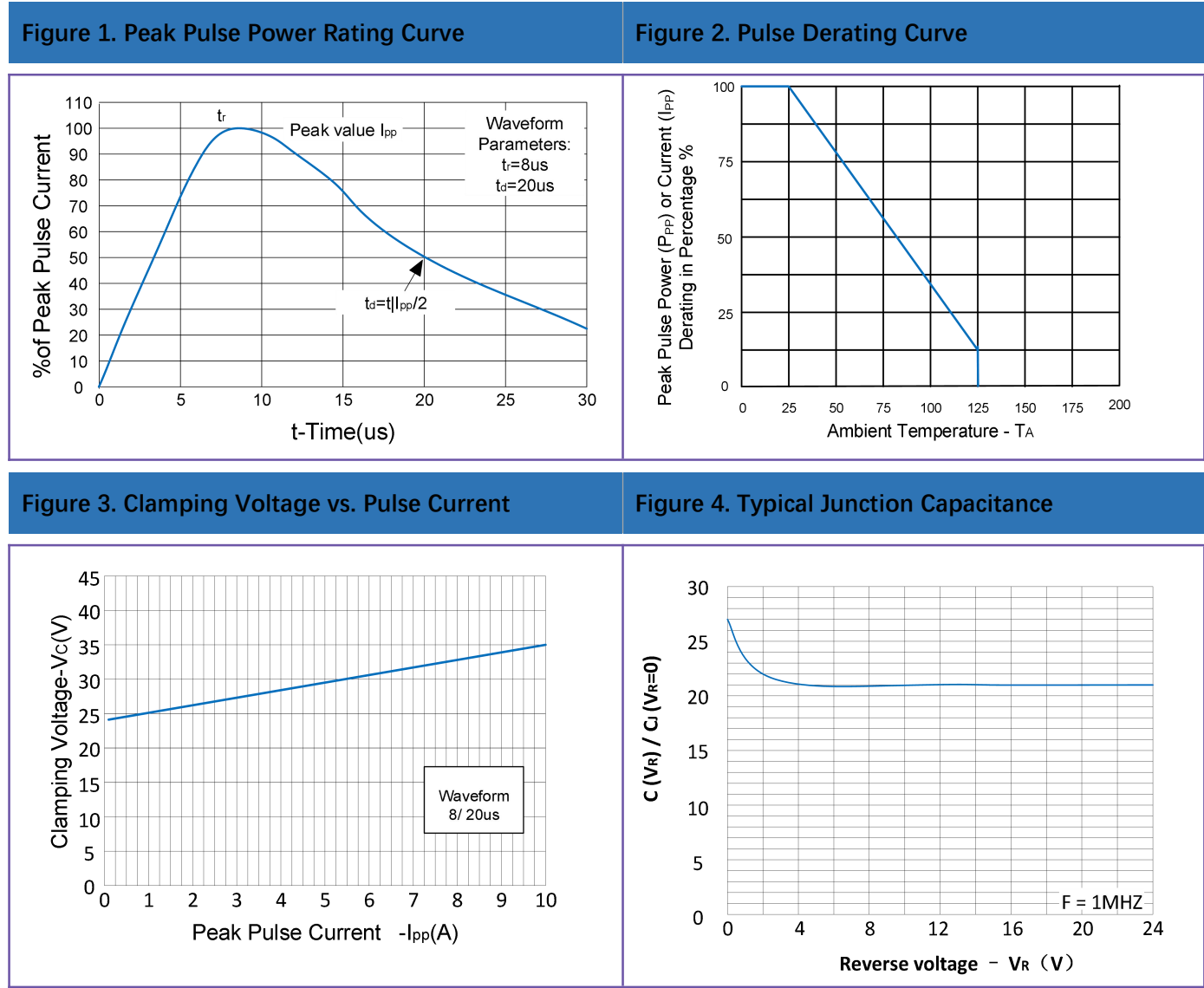
Maximum Rating and Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PPM}	250	W
ESD voltage (HBM contact)	VESD	± 8	KV
ESD voltage (AIR contact)		± 15	
Operating junction and Storage Temperature Range.	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

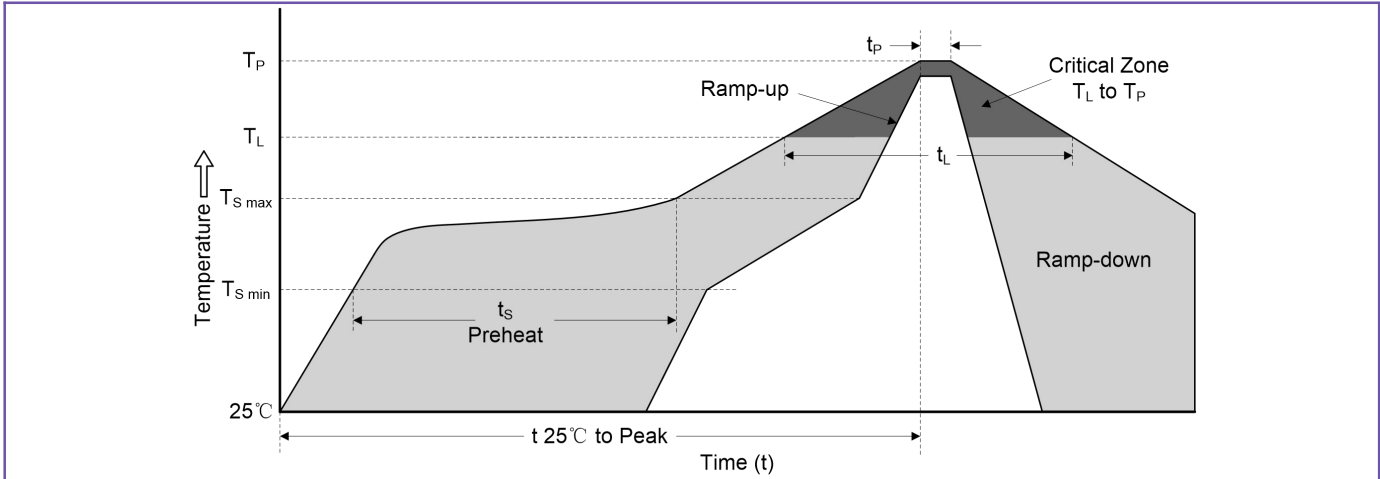
Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Part Number	Marking Code	Reverse Stand-Off Voltage	Breakdown Voltage @	Test Current	Maximum Clamping Voltage @ I_{PP}	Peak Pulse Current	Reverse Leakage @ V_{RWM}	Capacitance At 1MHZ 0V
		$V_{RWM}(V)$	$V_{BR}(V)\text{min}$	$I_T(mA)$	$V_C(V)$	$I_{PP}(A)$	$I_R(\mu A)$	$C_j(PF)$
LP2.5PT23 C15P02	BB2	15.0	16.4	1	35	10	1	20

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



Reflow Soldering Parameters



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

Package

Part number	QTY/Reel	Reel Size
LP2.5PT23C05P02	3000PCS	7Inch