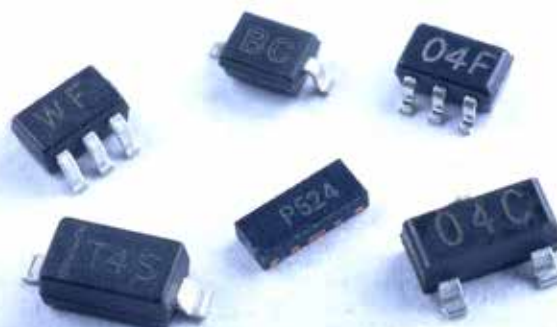




TVS/ESD Arrays

RLST23Axx2V Series

TVS/ESD Arrays - RLST23Axx2V Series

Features

- 350 Watts Peak Pulse Power per Line ($t_p = 8/20\mu s$)
- Working voltages: 3.3V、5V、8V、12V、15V、24V、36V
- Low Leakage Current
- Low operating and clamping voltages
- Lead Free/RoHS compliant
- Solid-state silicon avalanche technology
- Provides ESD protection to IEC61000-4-2(ESD):
 - ±15kV (air discharge)
 - ±8kV (contact discharge)



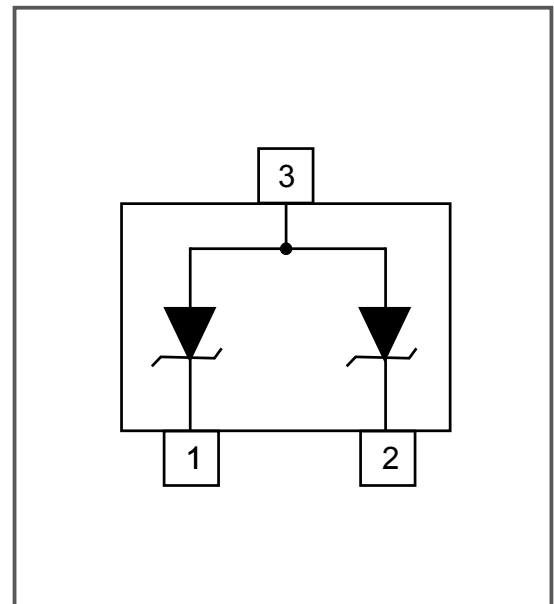
Mechanical Characteristics

- JEDEC SOT-23 Package
- Molding Compound Flammability Rating : UL 94V-O
- Weight 8 Milligrams (Approximate)
- Quantity Per Reel : 3,000pcs
- Reel Size : 7 inch
- Lead Finish : Lead Free

Applications

- High-Speed data lines
- Cellular handsets AND accessories
- Universal Serial Bus (USB) port protection
- Portable instrumentation
- LAN/WAN equipment
- Peripherals

Pinout and Functional Block Diagram



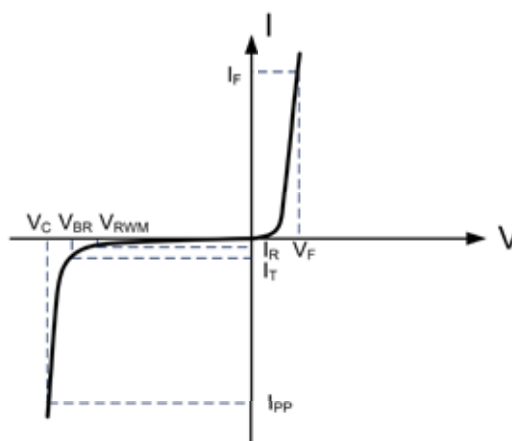
TVS/ESD Arrays - RLST23Axx2V Series

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PK}	350	Watts
ESD Voltage (Contact)	V_{ESD}	± 8	Kv
ESD Voltage (Air)	V_{ESD}	± 15	Kv
Lead Soldering Temperature	T_L	260 (10 sec.)	$^{\circ}C$
Operating Temperature	T_J	-55 to +125	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}C$

Electrical Parameters (T=25 $^{\circ}C$)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum 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 Per Lin (@ 25 $^{\circ}C$ Unless Otherwise Specified)

Type Number	Reverse Stand-Off Voltage	Minimum Breakdown Voltage	Peak Pulse Voltage @ 8/20 μs	Peak Pulse Current @ 8/20 μs	Reverse Leakage @ V_{RWM}	Typical Capacitance
	V_{RWM}	$V_{BR@1mA}$	$V_C@1A$	I_{PP}	$I_R@V_{RWM}$	DC=0V $C_J@1MHz$
	V	V	V	A	μA	pF
RLST23A032V	3.3	4.0	7	13	100	300
RLST23A052V	5	6.0	9.8	10	10	220
RLST23A082V	8	8.5	13.4	8	5	150
RLST23A122V	12	13.3	19	5	1	100
RLST23A152V	15	16.7	24	4	1	90
RLST23A242V	24	26.7	43	3	1	80
RLST23A362V	36	40	60	2	1	70

TVS/ESD Arrays - RLST23Axx2V Series

Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

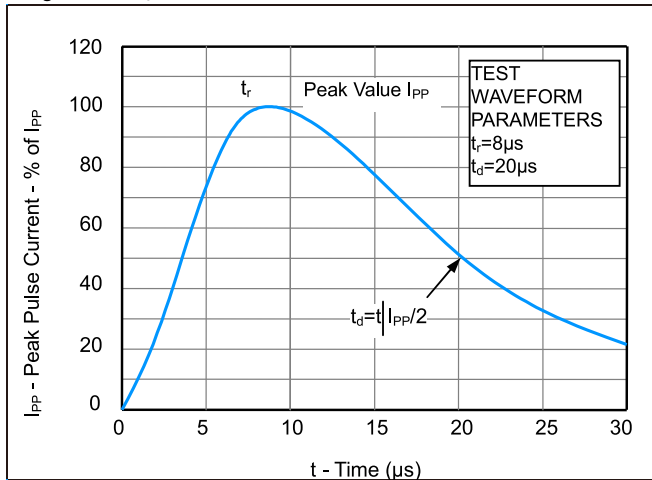


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

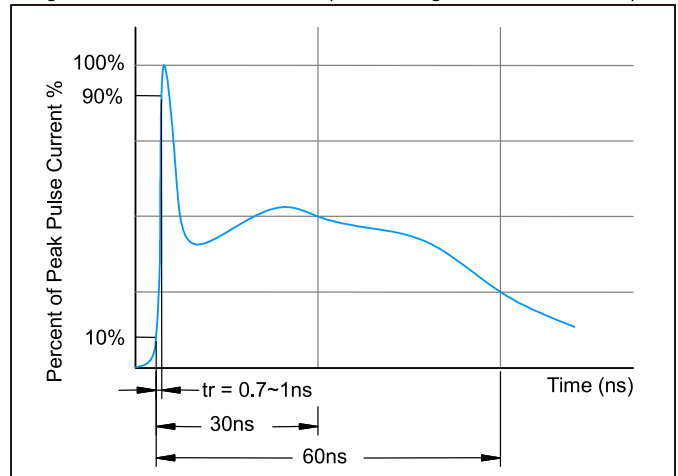


Fig3. Power Derating Curve

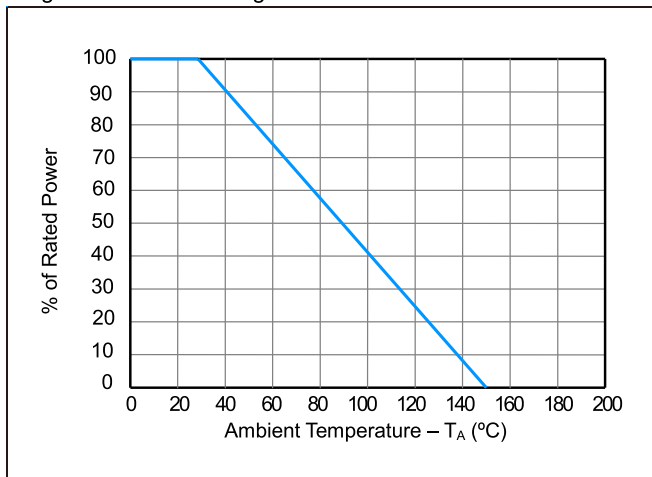
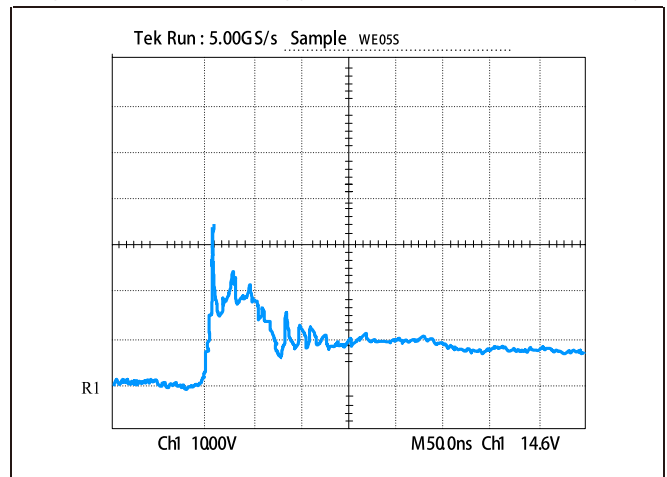
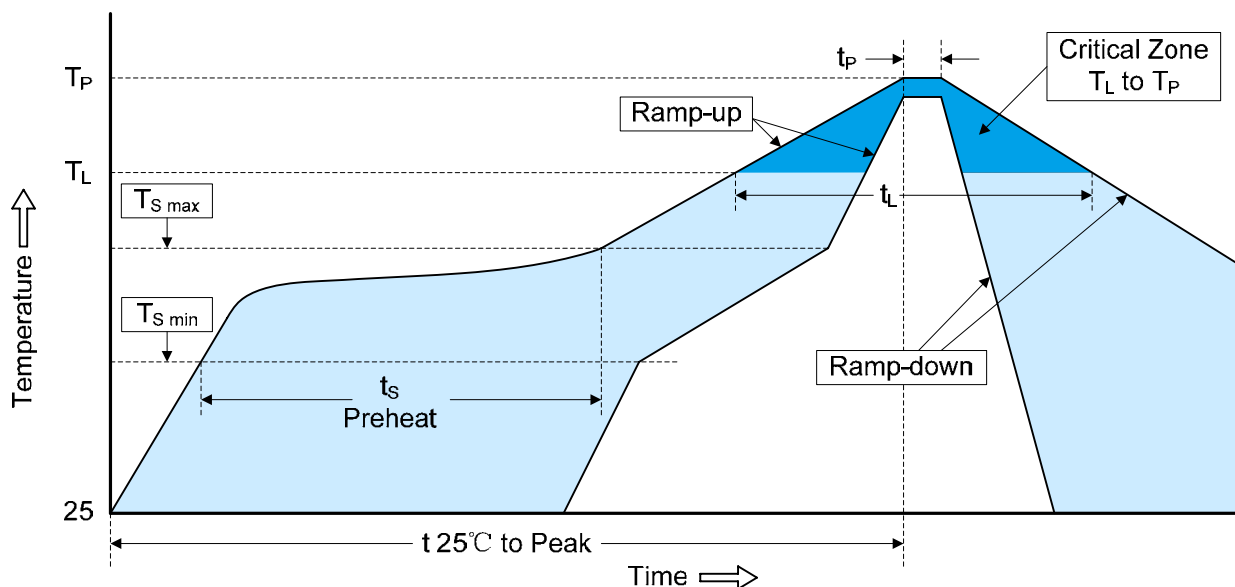


Figure 4: ESD Clamping (8kV Contact per IEC 61000-4-2)



TVS/ESD Arrays - RLST23Axx2V Series

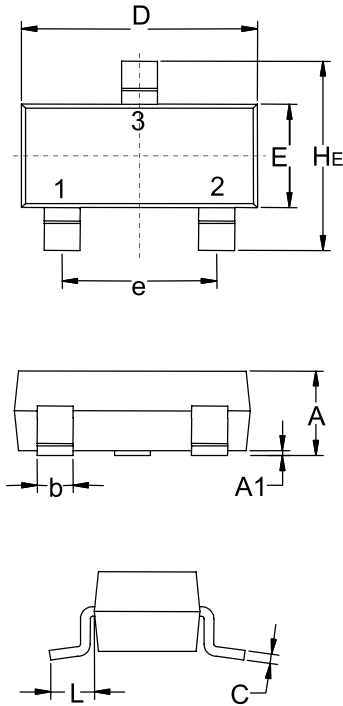
Recommended Soldering Conditions



Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat	
-Temperature Min ($T_{S \min}$)	150°C
-Temperature Max ($T_{S \max}$)	200°C
-Time (min to max) (t_s)	60-180 seconds
$T_{S \max}$ to T_L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T_L)	217°C
-Time (t_L)	60-150 seconds
Peak Temperature (T_P)	260°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	8 minutes max.

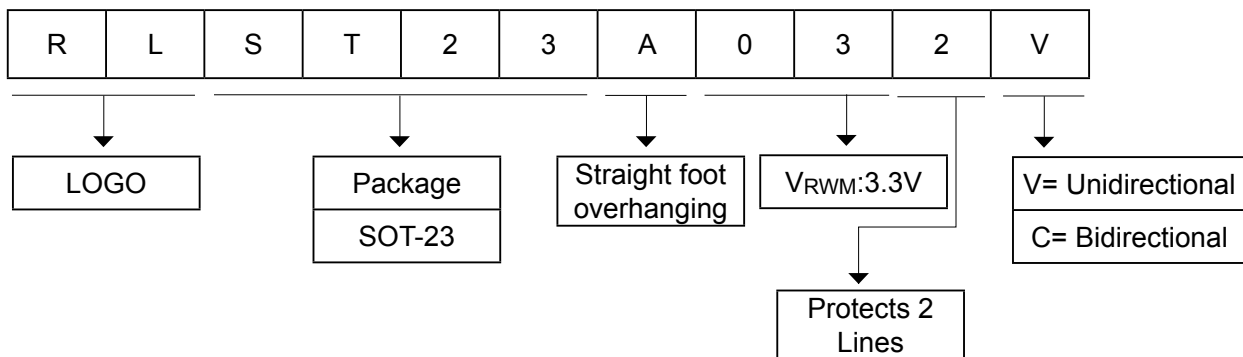
TVS/ESD Arrays - RLST23Axx2V Series

Package dimension SOT-23



DIM	Dimensions					
	Inches			Millimeters		
	Min	Nom	Max	Min	Nom	Max
A	0.035	0.040	0.044	0.89	1.00	1.12
A1	0.001	0.002	0.004	0.01	0.06	0.10
b	0.015	0.018	0.020	0.37	0.44	0.50
C	0.003	0.005	0.007	0.09	0.13	0.18
D	0.110	0.114	0.120	2.80	2.90	3.04
E	0.047	0.051	0.055	1.20	1.30	1.40
e	0.070	0.075	0.081	1.78	1.90	2.04
L	0.014	0.021	0.029	0.35	0.54	0.69
HE	0.083	0.094	0.104	2.1	2.4	2.64

Part Number Code



Ordering Information

Part Number	Package	Min. Order Qty.
RLST23Axx2V	SOT-23	3000pcs

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