



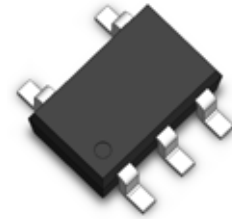
TVS/ESD Arrays

RLST353Axx4V Series

TVS/ESD Arrays - RLST353Axx4V Series

Features

- 100 Watts Peak Pulse Power per Line (tp = 8/20µs)
- Working voltages: 3.3V、 5V、 12V
- 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)



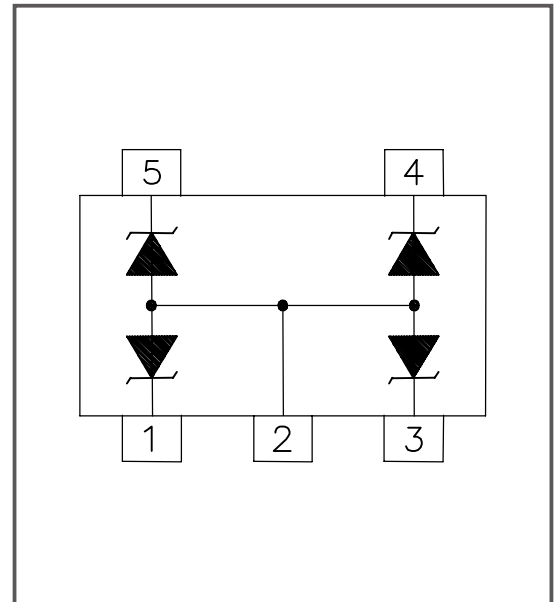
Mechanical Characteristics

- SOT-353 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel per EIA 481
- Lead Finish: Matte tin
- RoHS Compliant

Applications

- Cellular Handsets and Accessories
- Cordless Phones
- Personal Digital Assistants (PDA's)
- Notebooks and Handhelds
- Portable Instrumentation
- Peripherals
- MP3 Players

Pinout and Functional Block Diagram



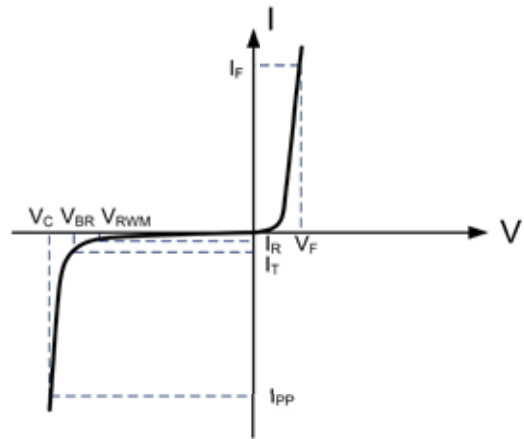
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Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power (tp =8/20μs)	PPK	100	Watts
ESD Voltage (Contact)	V _{ESD}	±8	Kv
ESD Voltage (Air)	V _{ESD}	±15	Kv
Lead Soldering Temperature	T _L	260 (10 sec.)	°C
Operating Temperature	T _J	-55 to +125	°C
Storage Temperature	T _{STG}	-55 to +150	°C

Electrical Parameters (T=25°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°C Unless Otherwise Specified)

Type Number	Reverse Stand-Off Voltage	Minimum Breakdown Voltage	Peak Pulse Voltage @8/20μS	Peak Pulse Current @8/20μS	I _R Reverse Leakage @V _{RWM}	Typical Capacitance
	V _{RWM}	V _{BR} @1mA	V _C @1A	I _{PP}	I _R @V _{RWM}	DC=0V C _J @ 1 MHz
	V	V	V	A	μA	pF
RLST353A034V	3.3	4.5	6	4	5	40
RLST353A054V	5	6	9.8	3	2	30
RLST353A124V	12	13.3	17	2	1	25

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Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

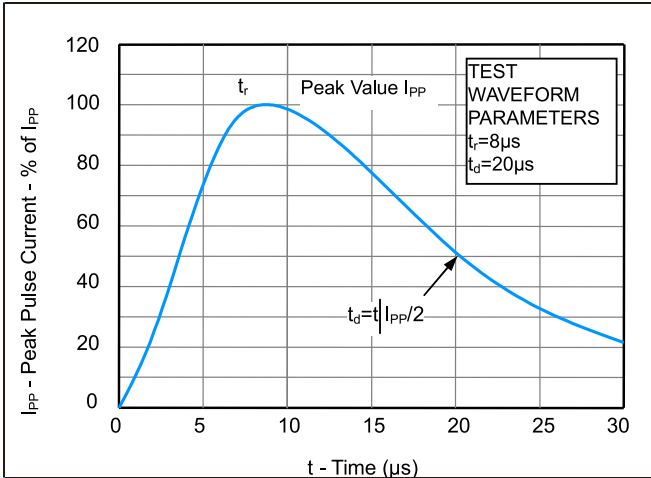


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

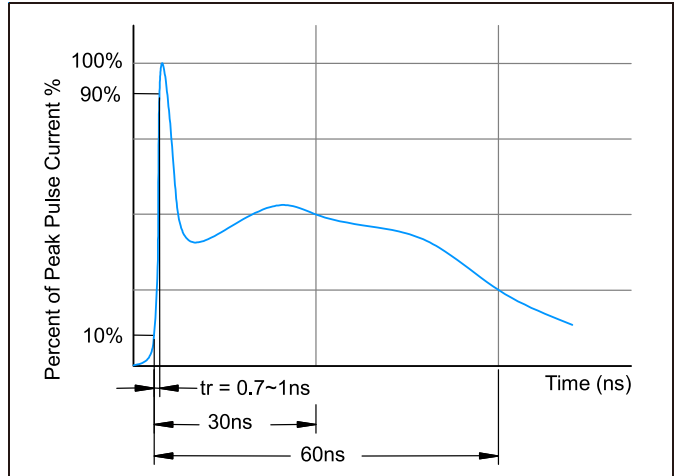


Fig3. Power Derating Curve

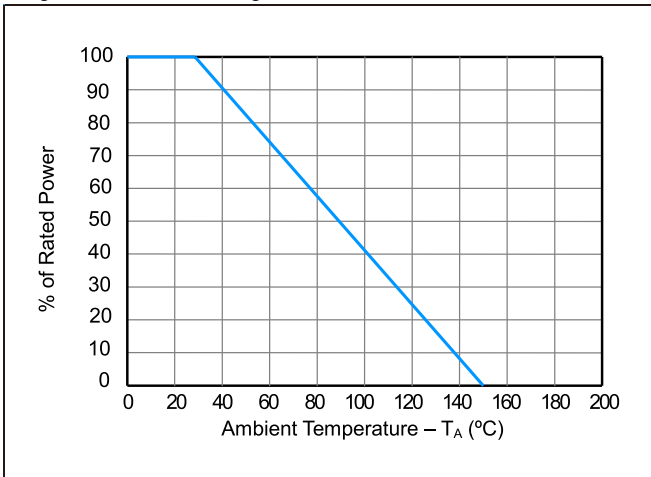
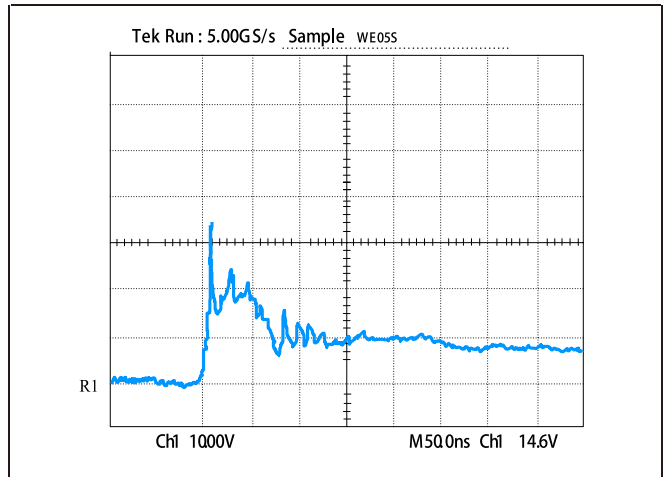
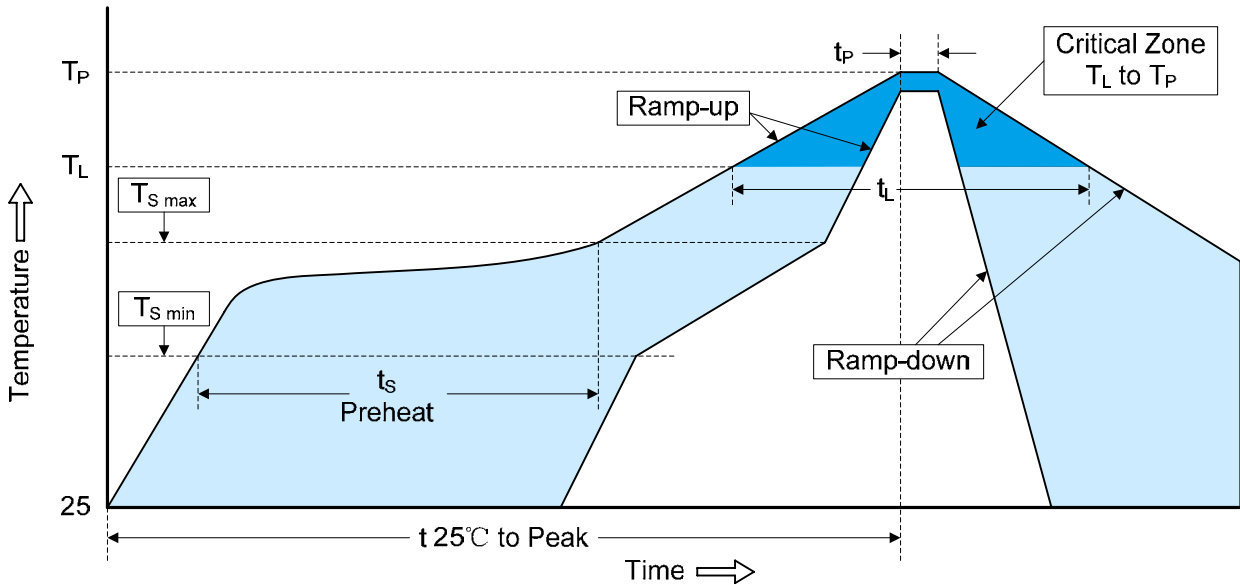


Figure 4: ESD Clamping (8kV Contact per IEC 61000-4-2)



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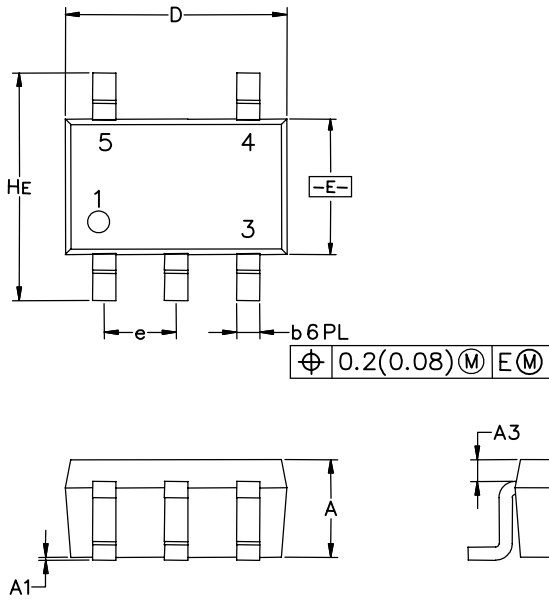
Recommended Soldering Conditions



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.

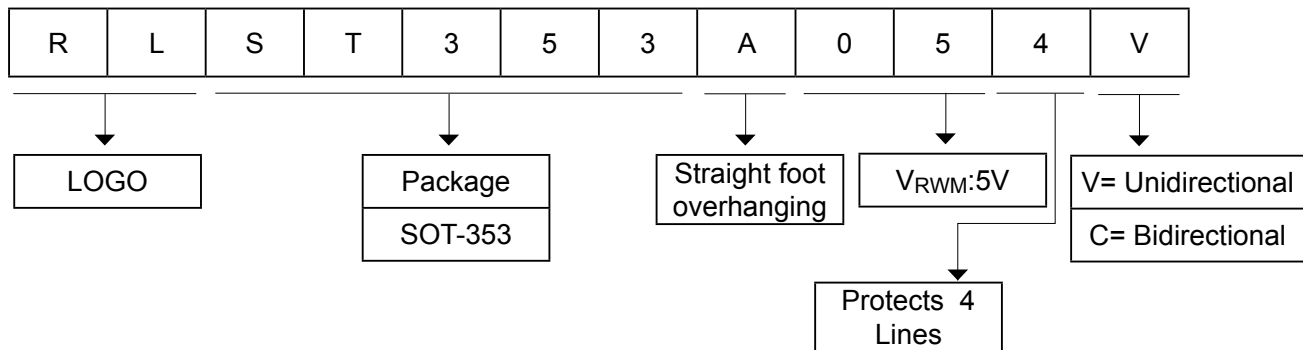
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Package Dimension SOT-353



Symbol	Inches			Millimeters		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.031	0.037	0.043	0.80	0.95	1.10
A1	0.000	0.002	0.004	0.00	0.05	0.10
A3	0.08 REF			0.2 REF		
b	0.004	0.008	0.012	0.10	0.21	0.30
C	0.004	0.005	0.010	0.10	0.14	0.25
D	0.070	0.078	0.086	1.80	2.00	2.20
E	0.045	0.049	0.053	1.15	1.25	1.35
e	0.026 BSC			0.65 BSC		
L	0.004	0.008	0.012	0.10	0.20	0.30
HE	0.078	0.082	0.086	2.00	2.10	2.20

Part Number Code



Ordering Information

Part Number	Package	Min. Order Qty.
RLST353Axx4V	SOT-353	3000pcs

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