

ESDXXV14TS-2C Series

ROHS

Transient Voltage Suppressors for ESD Protection

Description

The ESDXXV14TS-2C series is designed to protect voltage sensitive components from ESD and transient voltage events. This product has been qualified in accordance with the Automotive Electronics Council (AEC) standard Q101, it is suitable for use in automotive applications. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.

Feature

- ◆ Moisture Sensitivity Level (MSL -1)
- ◆ AEC-Q101 qualified
- ◆ 300~529 Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
- ◆ Protects one bidirectional I/O line
- ◆ Low Clamping Voltage
- ◆ Working Voltages: 5.0V~36V
- ◆ Low leakage current
- ◆ IEC61000-4-4 (EFT): 40A (5/50ns)
- ◆ IEC61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact): 5.0V ~ 15V
- ◆ IEC61000-4-2 (ESD) $\pm 15kV$ (air), $\pm 10kV$ (contact): 18V ~ 36V

Applications

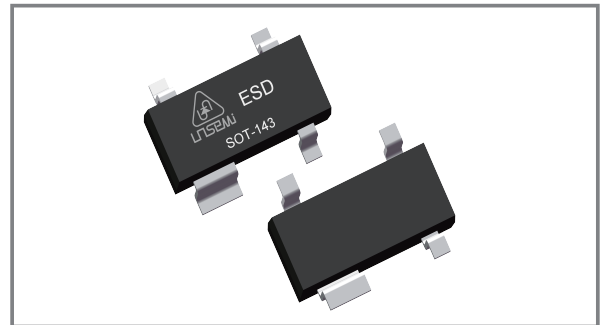
- ◆ RS-232, RS-422 & RS-423 Data Lines
- ◆ Audio/Video Inputs
- ◆ Wireless Network Systems
- ◆ Ethernet - 10/100/1000 Base T
- ◆ WAN/LAN Equipment
- ◆ Multi-Protocol Serial Transceivers
- ◆ ADSL Interfaces

Mechanical Characteristics

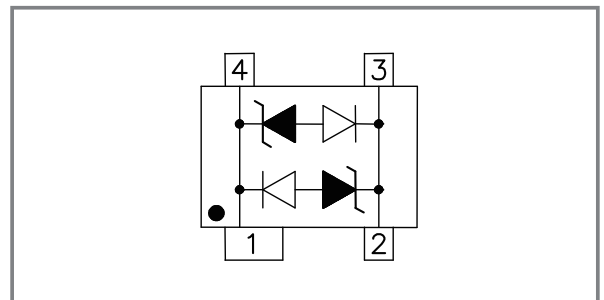
Parameter	Symbol	Value	Units
Peak Pulse Power ($T_p=8/20\mu s$ waveform)	P_{pp}	300-529	Watts
Lead Soldering Temperature	T_L	260 (10 sec.)	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}C$
Operating Junction Temperature Range	T_J	-55 to +150	$^{\circ}C$



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Functional Diagram



Mechanical Data

- ◆ JEDEC SOD-143 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 10.0 Milligrams (Approximate)
- ◆ Lead Finish : Lead Free

Electrical Characteristics @ 25°C Unless Otherwise Specified)

Part Number	Device Marking Code	Stand-Off Voltage V_{RWM} (V)	Breakdown Voltage $V_{BR}(Min)$ (V)	Test Current I_T (mA)	V_c @1A (Max.)	V_c		Maximum Reverse Leakage I_R @ V_{RWM} (uA)	Typ Junction Capacitance (pF)
						(Max.)	(@A)		
ESD05V14TS-2C	DT5	5	6.0	1.0	9.8	20	25	1	3
ESD08V14TS-2C	DT8	8	8.5	1.0	13.4	23	23	1	3
ESD12V14TS-2C	DTA	12	13.3	1.0	19.0	30	13	1	3
ESD15V14TS-2C	DTB	15	16.7	1.0	25.0	33	10	1	3
ESD18V14TS-2C	DTC	18	19.5	1.0	32.0	40	9	1	3
ESD24V14TS-2C	DTD	24	26.7	1.0	40.0	55	6	1	3
ESD36V14TS-2C	DTE	36	40.0	1.0	55.0	75	4	1	3

Characteristic Curves

Fig1. 8/20μs Pulse Waveform

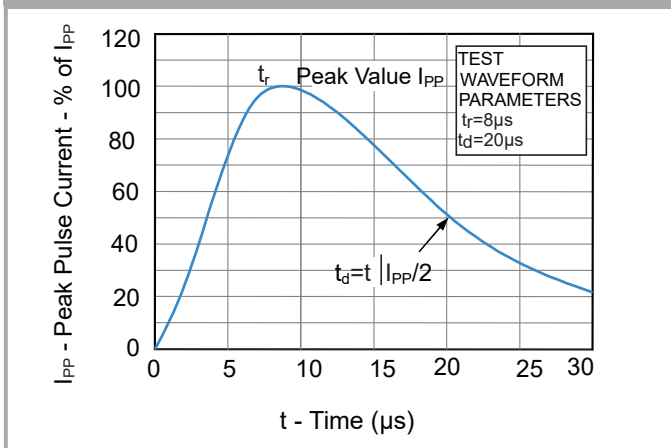


Fig2. Power Rating Derating Curve

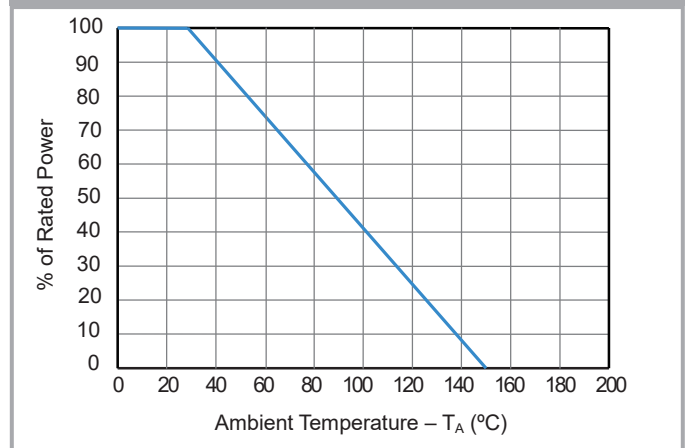
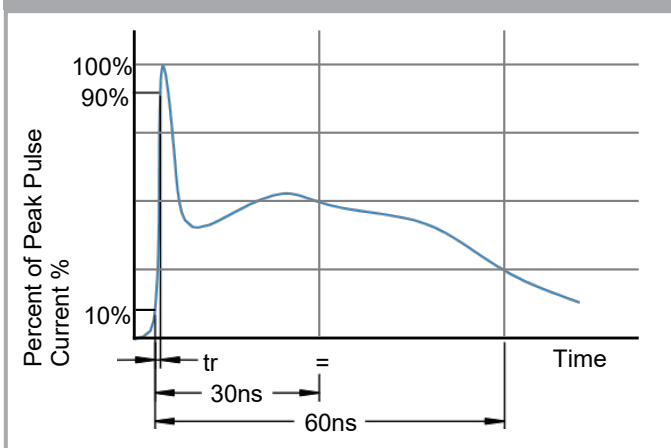
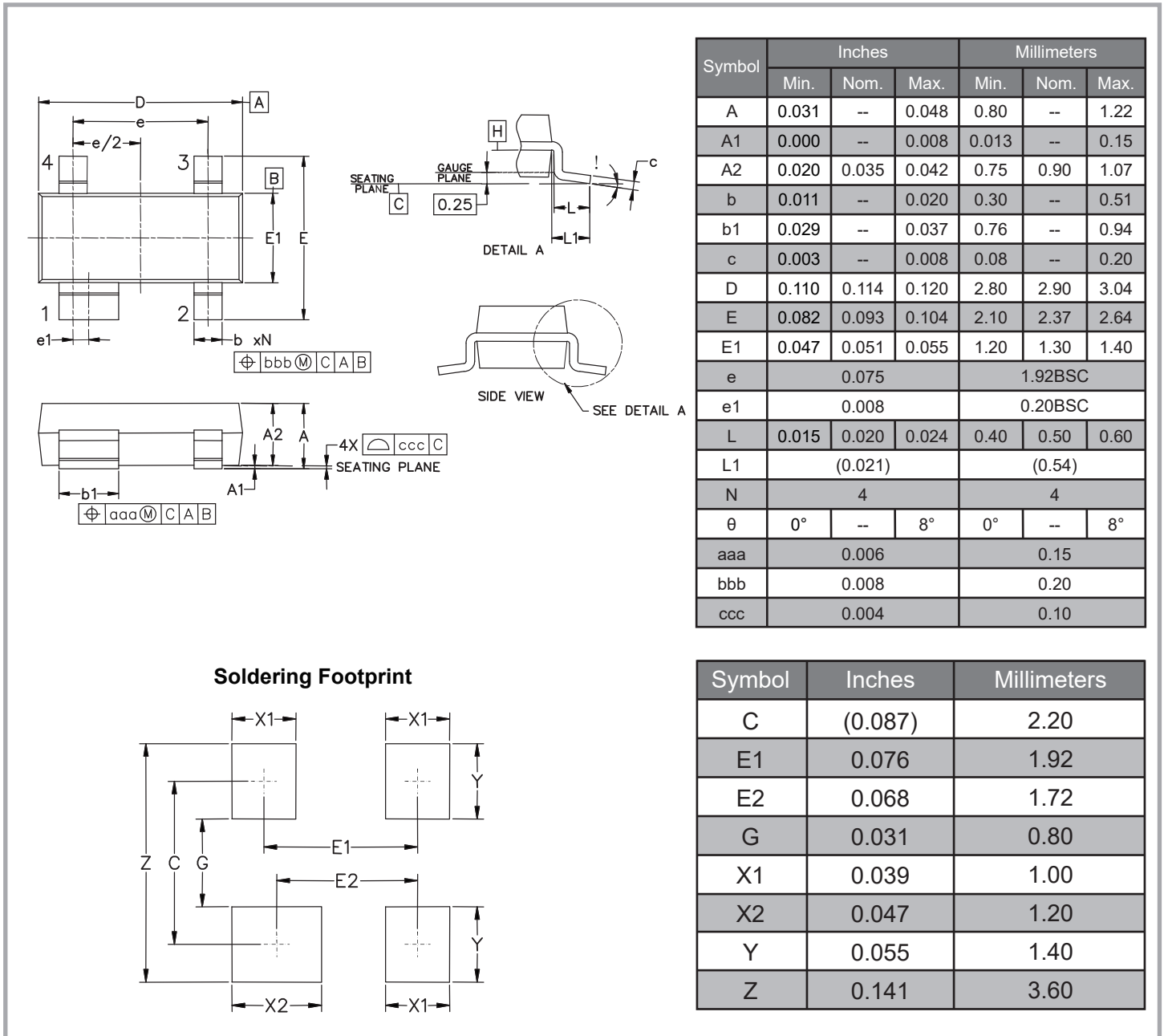


Fig3. ESD Pulse Waveform (according to IEC61000-4-2)



SOT-143 Package Outline & Dimensions



Ordering Information

Device	Package	Quantity	Reel Size
ESDXXV14TS-2C Series	SOT-143	3,000pcs/Reel	7 inch

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