

Features

- Low operating voltage: $\pm 12V$
- Ultra low capacitance: 15pF
- Ultra low leakage: nA level
- Low clamping voltage
- -IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30kV$
 - Contact discharge: $\pm 30kV$
- -IEC61000-4-4 (EFT) 40A (5/50ns)
- 2-pin leadless package
- These are Pb-Free Devices
- Response Time is Typically $< 1\text{ ns}$

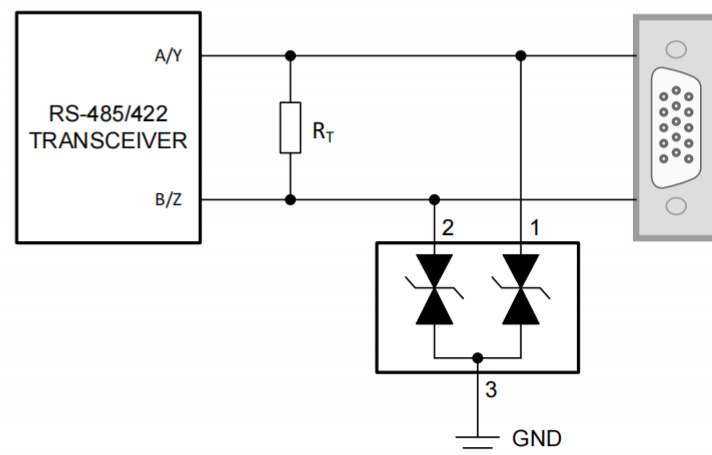
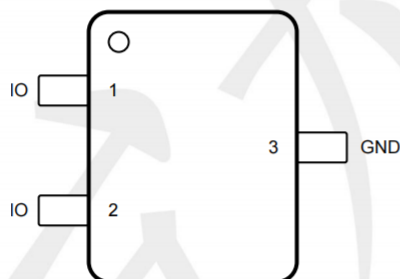
Mechanical Characteristics

- Package: SOT23
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound
- Terminal Connections: See Diagram Below
- -IEC 61000-4-2 (ESD) immunity test

Applications

- RS-485
- RS-422
- Security systems
- Portable Instrumentation
- Peripherals

Dimensions and Pin Configuration



Typical Application Schematic

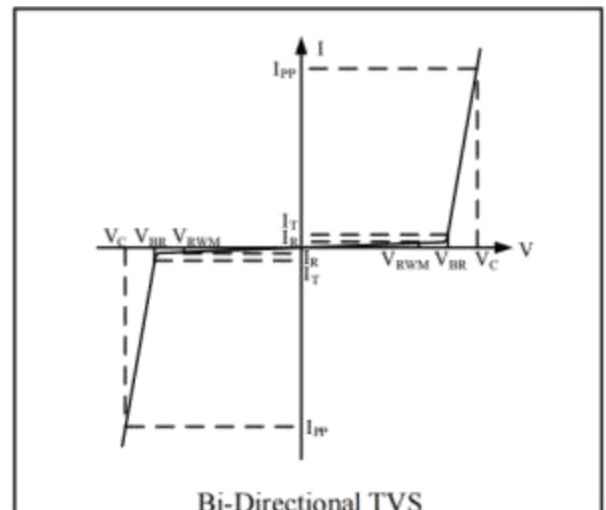
Absolute Maximum Ratings($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μ s)	Ppk	500	W
IEC 61000-4-2 Spec Current at 60 ns (A)	Ipp	20	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	± 30 ± 30	KV
Operating Temperature Range	TJ	-55 to +125	$^{\circ}C$
Storage Temperature Range	Tstg	-55 to +150	$^{\circ}C$

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM	-12	--	12	V	
Breakdown Voltage	VBR	13.2	--	18	V	$I_T=1mA$
Reverse Leakage Current	IR	--	--	100	nA	VRWM=12V
Clamping Voltage	VC	--	--	23.5	V	Ipp=20A(8x 20us pulse)
Junction Capacitance	CJ	--	15	--	pF	VR = 0V, f = 1MHz

Symbol	Parameter
V_{RWM}	Nominal Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Reverse Breakdown Voltage @ I_T
I_T	Test Current for Reverse Breakdown
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Maximum Peak Pulse Current
C_{ESD}	Parasitic Capacitance
V_R	Reverse Voltage
f	Small Signal Frequency



Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

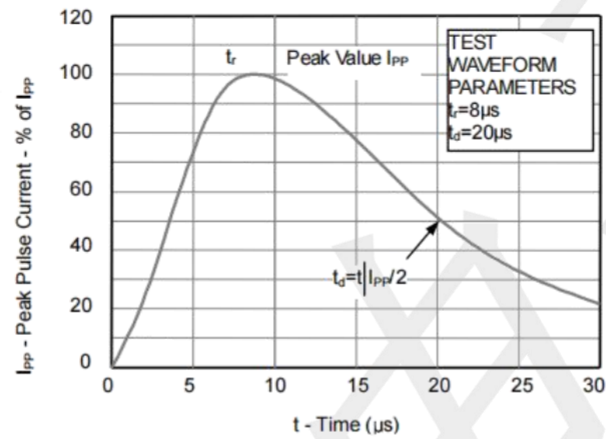


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

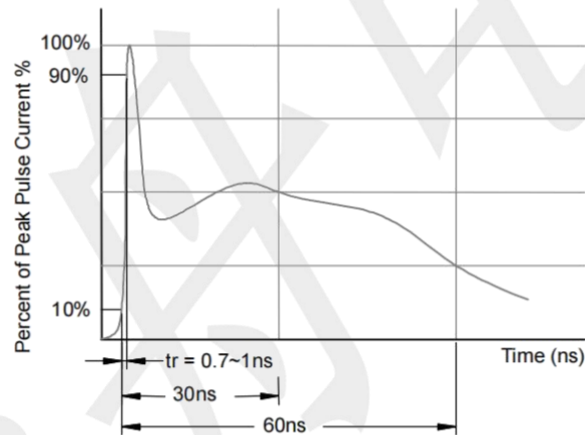
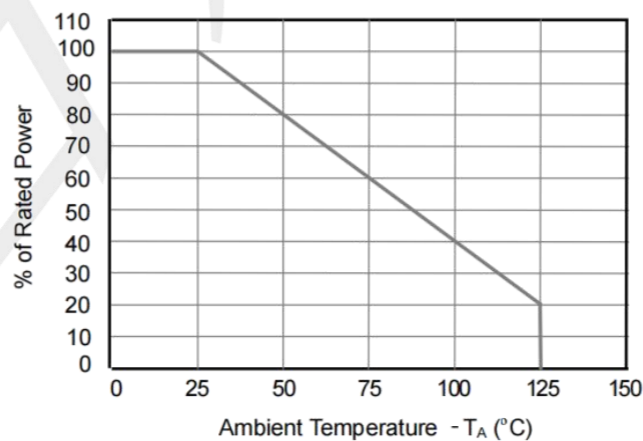
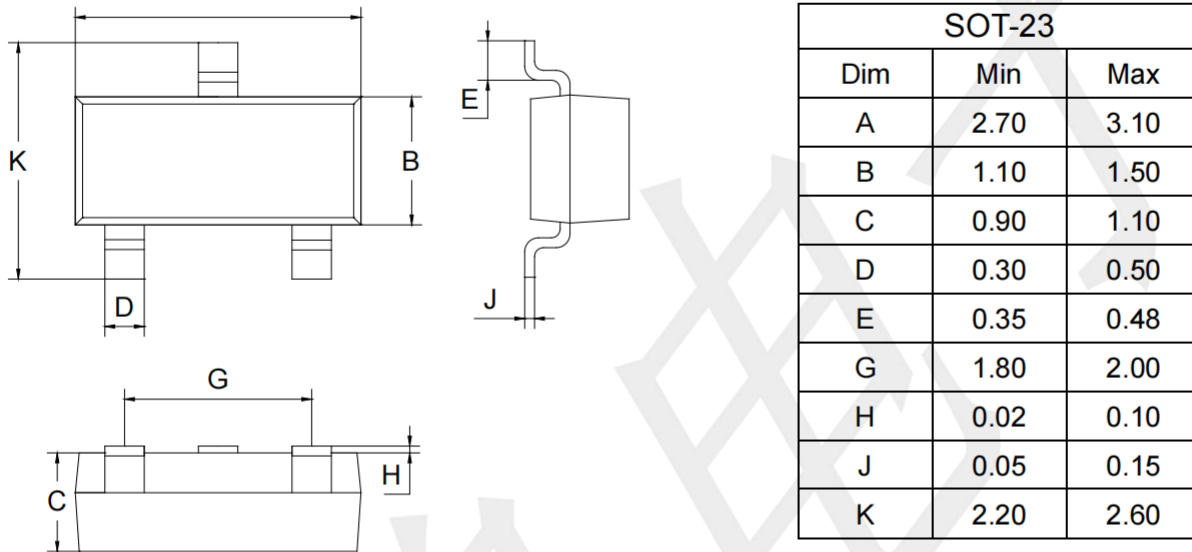


Fig3. Power Derating Curve



Package Outline Dimensions (unit: mm)



Mounting Pad Layout (unit: mm)

