Features

- Uni-directional ESD protection of two lines
- 38Watts peak pulse power (tp = 8/20μs)
- Working voltage: 5V
- Junction Capacitance:0.3pF(Typ)
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 ±25kV contact ±25kV air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 3.5A (8/20μs)

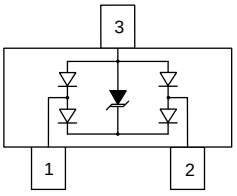
Applications

- USB2.0 and USB3.0
- HDMI1.3 and HDMI1.4
- SATA and eSATA
- Portable Electronics
- DVI

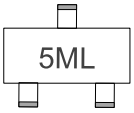
Mechanical Data

- Package:SOT-23
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	Packing	Reel Size
ESD5302F-3/TR	SOT-23		3000 Tape & Reel	7 inches

Absolute Maximum Rating(T_A=25°C unless otherwise Specified)

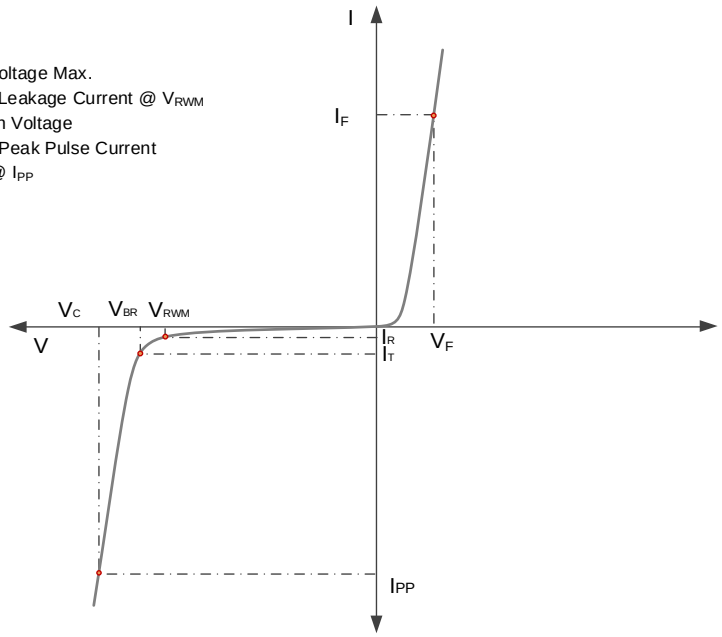
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P_{pk}	38	W
Peak Pulse Current (8/20μs)	I_{PP}	3.5	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	25 25	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	−55 to +125	°C
Storage Temperature Range	T_{stg}	−55 to +125	°C

Electrical Characteristics(T_A=25°C unless otherwise Specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	IT = 1mA	6			V
Reverse Leakage Current	I_R	VRWM=5V,T=25℃			0.5	μA
Peak Pulse Current	I_{PP}	tp=8/20μs			3.5	A
Clamping Voltage	V_C	IPP = 3.5A (8 x 20μs pulse)			11	V
Junction Capacitance	C_J	VR=0V, f=1MHz pin1/pin2 to pin3		0.6	0.8	pF
Junction Capacitance	C_J	VR=0V, f=1MHz pin1 to pin2		0.3	0.5	pF

Electrical Parameters (T_A = 25°C unless otherwise noted)

V_{RWM} ·····Reverse Working Voltage Max.
IR ····· Maximum Reverse Leakage Current @ V_{RWM}
V_{BR} ····· Reverse Breakdown Voltage
IPP ····· Maximum Reverse Peak Pulse Current
VC ····· Clamping Voltage @ I_{PP}



Typical Characteristics(T_A=25°C unless otherwise Specified)

Figure 1: Peak Pulse Power vs. Pulse Time

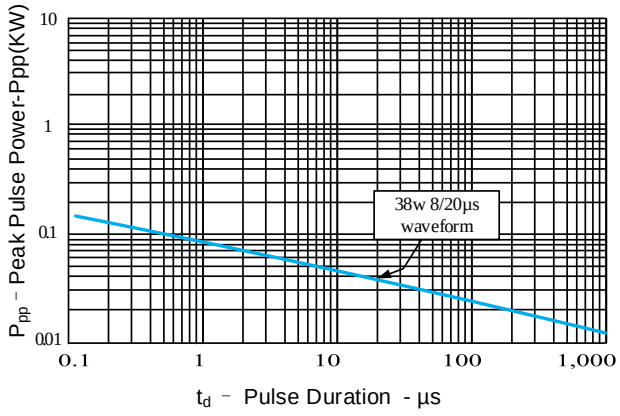


Figure 2: Power Derating Curve

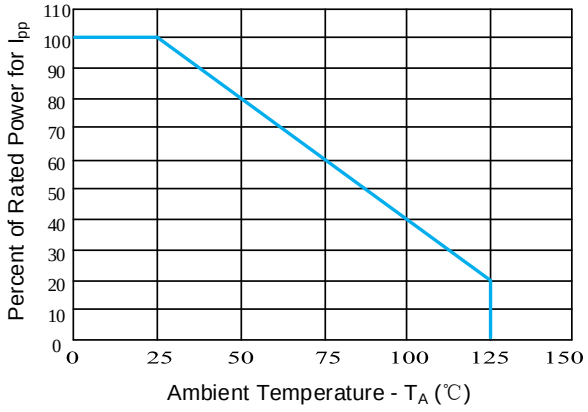


Figure3: Pulse Waveform

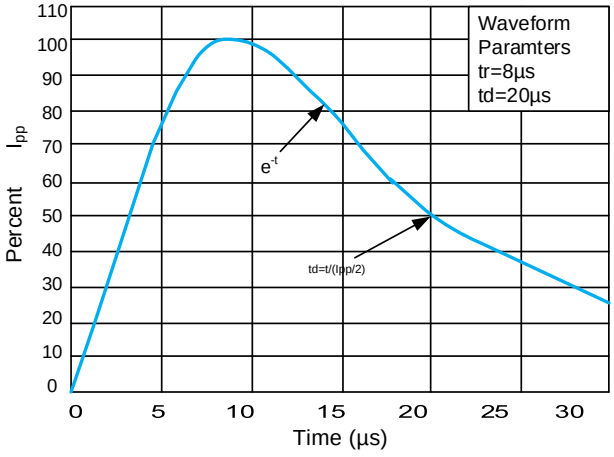
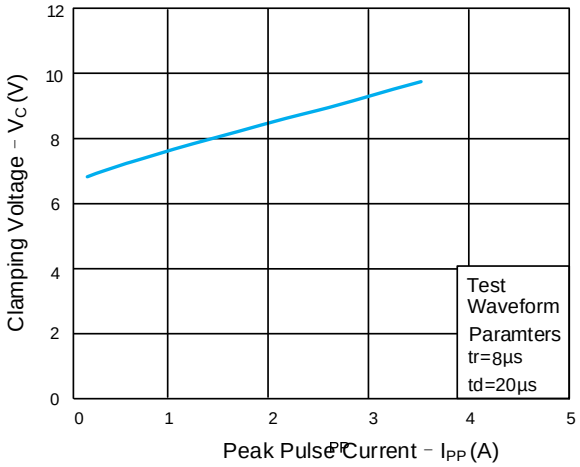
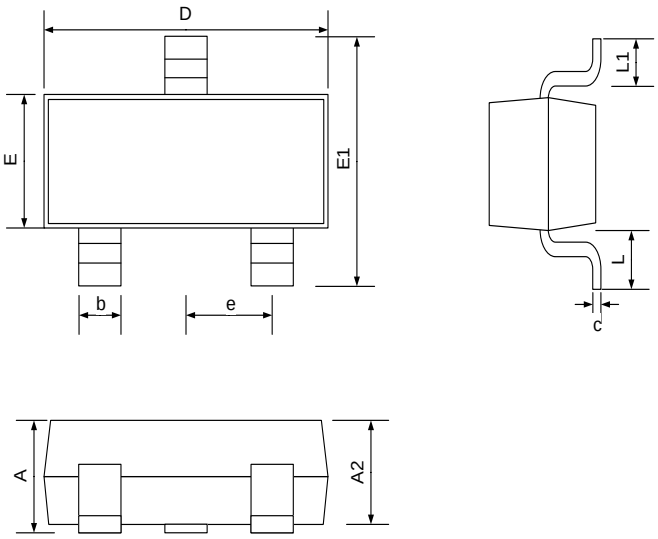


Figure 4: Clamping Voltage vs.Ipp



Outline Drawing – SOT23



COMMON DIMENSION (mm)			
PKG	SOT23		
REF.	MIN.	NOM.	MAX.
A	0.900		1.150
A2	0.900		1.050
b	0.300		0.500
c	0.080		0.150
D	2.800		3.000
E	1.200		1.400
E1	2.250		2.550
e		0.950	
L		0.550	
L1	0.300		0.500

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