

ESD0502TL

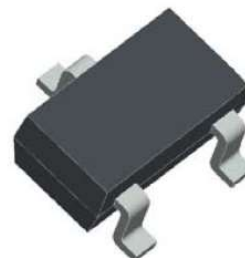
ESD0502TL Ultra Low Capacitance TVS/ESD Protection Diode

General description

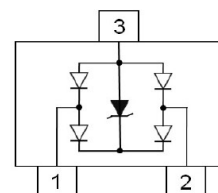
Silicon Protection Diode in a SOT-23 Package.

FEATURES

- 60 Watt peak pulse power ($t_p=8/20$)
- Low Leakage Current
- Low clamping voltage
- Ultra Low capacitance ($C_j=0.2$ pF typ.)
- Protection two data line
- IEC 61000-4-2 8Kv Contact /15Kv air.
- IEC 61000-4-4 EFT 40A(5/50nS)



Package : SOT-23



Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
P _{pp}	Peak pulse power	60	W
T _{stg}	Storage Temperature Range	-55 to +150	°C
T _J	Junction Temperature	-55 to +125	°C
ESD	IEC61000-4-2 Air Discharge Contact Discharge	20 20	KV
EFT	IEC61000-4-4	40	A

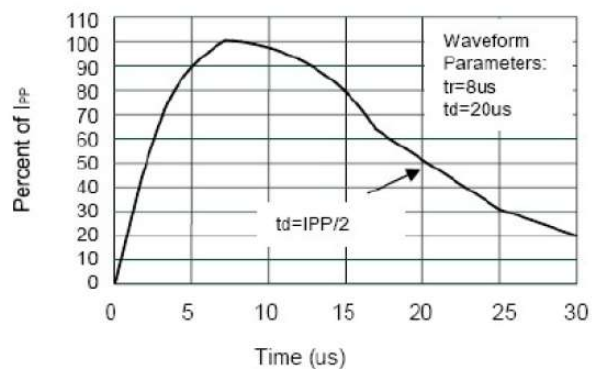
Device Marking:

Device Type	Marking	Shipping
ESD0520TL	52L	3,000/Reel

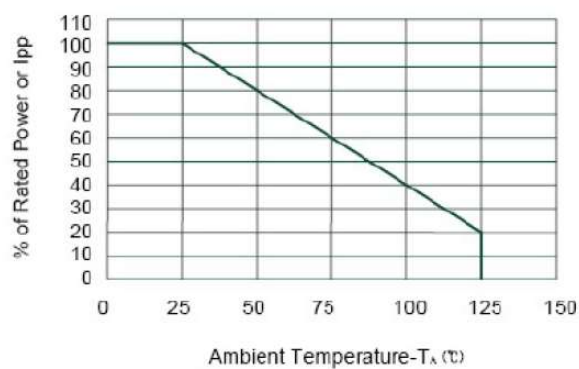
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V _{RWM}	Reverse Working Voltage	I/O to GND			5.0	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA Between I/O and GND	6.0			V
I _R	Reverse Leakage Current	V _{RWM} = 5V Between I/O and GND			100	nA
V _C	Clamping Voltage	I _{PP} = 1A, t _p = 8/20μs Between I/O and GND			10	V
		I _{PP} = 4A, t _p = 8/20μs Between I/O and GND			15	V
V _F	Forward Voltage	I _T = 10mA Between I/O and GND			1.2	V
C _T	Total Capacitance	V _R = 0V, f = 1MHz Between I/O and GND		0.4		pF
		V _R = 0V, f = 1MHz Between I/O and I/O		0.2		pF

ELECTRICAL CHARACTERISTICS CURVE

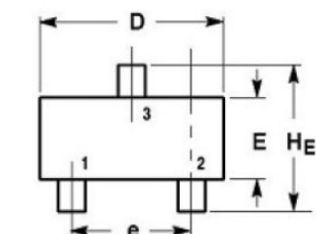


Pulse Waveform

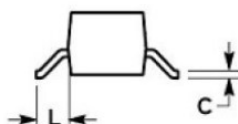
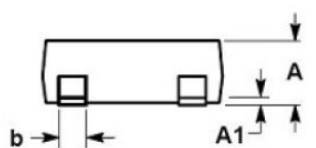


Power Derating Curve

SOT-23 PACKAGE OUTLINE DIMENSIONS



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1.00	1.11	0.035	0.040	0.044
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.37	0.44	0.50	0.015	0.018	0.020
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.40	2.64	0.083	0.094	0.104



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