



DATA SHEET

SEMICONDUCTOR

YSULC0502T3

Low Capacitance TVS Diode Array



APPLICATIONS

- ◆ USB 2.0 / 3.0 High Speed
- ◆ High-Definition Multimedia Interface (HDMI)
- ◆ Mobile Display Digital Interface (MDDI)
- ◆ RF/Antenna Circuits
- ◆ GaAs Photodetector Protection
- ◆ Peripherals
- ◆ Infiniband Transceiver Protection

IEC COMPATIBILITY

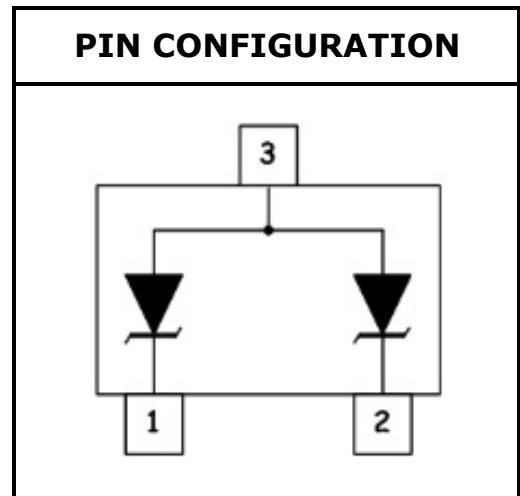
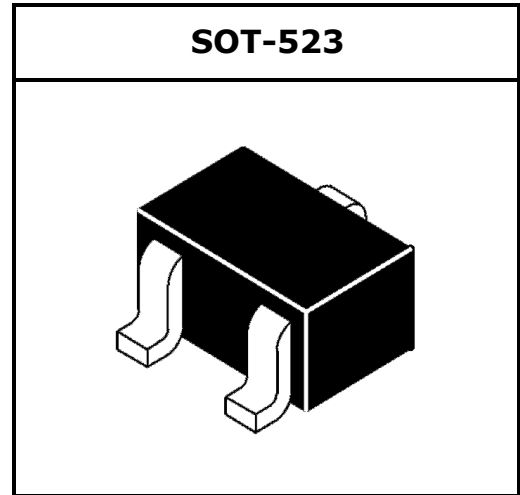
- ◆ IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50 η s)

FEATURES

- ◆ 100 Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
- ◆ Protects up to two high speed I/O lines
- ◆ Low capacitance (0.8pF) for high-speed interfaces
- ◆ Working voltages : 5.0V above
- ◆ Ultra-small package requires less than 2.9mm² of PCB area

MECHANICAL CHARACTERISTICS

- ◆ SOT-523 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 3 Milligrams (Approximate)
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Reel Size : 7 inch
- ◆ Lead Finish : Lead Free



DEVICE CHARACTERISTICS

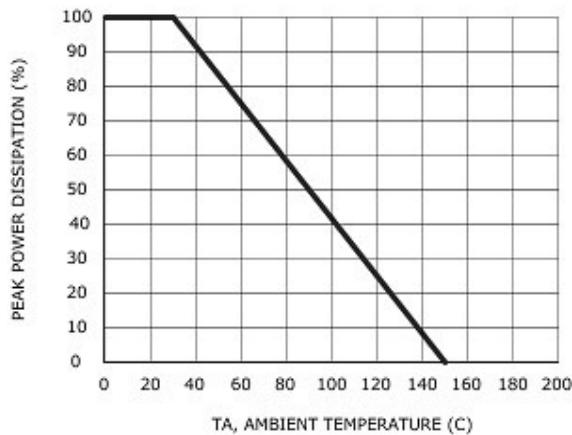
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MAXIMUM RATINGS (@ 25°C Unless Otherwise Specified)

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp=8/20μs waveform)	P _{PP}	100	Watts
Lead Soldering Temperature	T _L	260 (10 sec.)	°C
Operating Temperature Range	T _J	-55 ~ 150	°C
Storage Temperature Range	T _{STG}	-55 ~ 150	°C

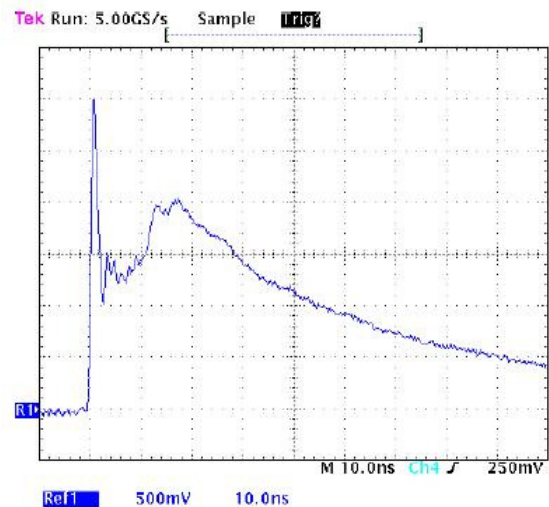
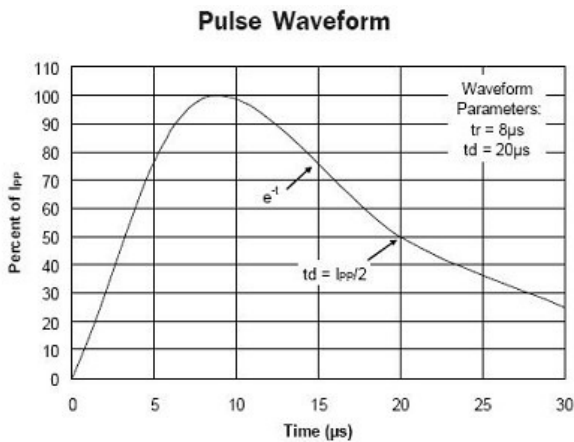
ELECTRICAL CHARACTERISTICS PER LINE (@ 25°C Unless Otherwise Specified)

PART NUMBER	DEVICE MARKING	V _{RWM}	V _B	I _T	V _C	V _C		I _R	C _T
		(V) (max.)	(V) (min.)	(mA)	@1A (max.)	(max.)	(@A)	(μA) (max.)	(pF) (typ.)
YSULC0502T3	P5	5	6	1	15	25	2	1	1.0



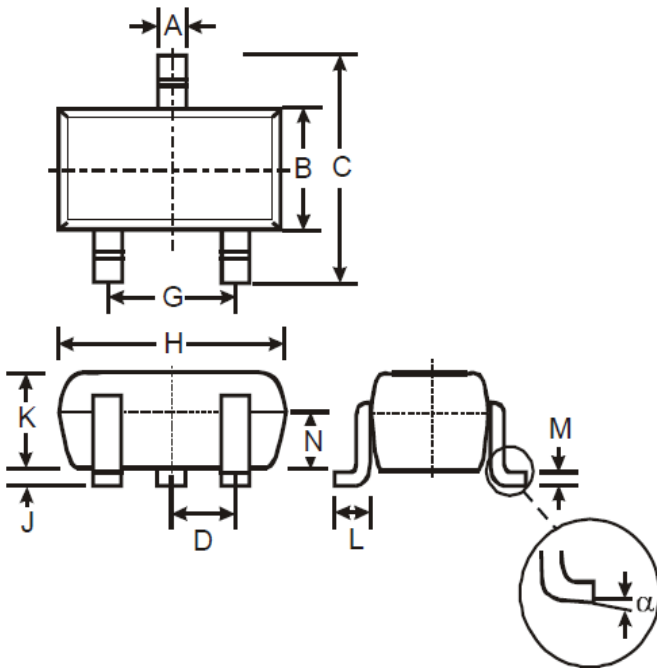
Power Derating Curve

ESD Pulse Waveform (Per IEC 61000-4-2)



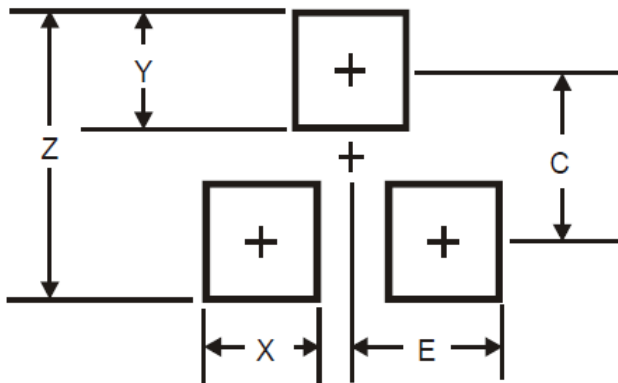
PACKAGE OUTLINE & DIMENSIONS

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SOT-523			
Dim	Min	Max	Typ
A	0.15	0.30	0.22
B	0.75	0.85	0.80
C	1.45	1.75	1.60
D	—	—	0.50
G	0.90	1.10	1.00
H	1.50	1.70	1.60
J	0.00	0.10	0.05
K	0.60	0.80	0.75
L	0.10	0.30	0.22
M	0.10	0.20	0.12
N	0.45	0.65	0.50
α	0°	8°	—
All Dimensions in mm			

* SOLDERING FOOTPRINT



Dimensions	Value (in mm)
Z	1.8
X	0.4
Y	0.51
C	1.3
E	0.7