E12MUWA1C-A

Design Viitor into your FUTURE

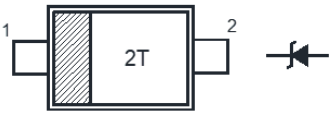
Single Line TVS Diode for ESD Protection

Features

- 500 Watts peak pulse power (tp = 8/20 μs)
- Transient protection for each line to
  IEC 61000-4-2 (ESD) ± 30KV (air / contact)
  IEC 61000-4-5 (Lightning): 20A (8/20 μs)
- Suitable for 12V and below operating voltage application
- Protect one I/O line or one power line
- Fast turn-on and low clamping voltage
- Halogen and Antimony Free(HAF),
  RoHS compliant
- AEC-Q101 Qualified

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Marking Code : 2T
Simplified outline SOD-123F and symbol

Applications

- Battery Contacts
- Power management system
- Portable devices
- Laptop, desktop PC and servers.
- Microprocessor based equipment
- Peripherals

Absolute Maximum Ratings (at T_a = 25℃ unless otherwise specified)

Parameter		Symbol	Value	Unit
Peak Pulse Power (tp = 8/20 μs)		P_{PK}	500	W
Peak Pulse Current (tp = 8/20 μs)		I_{PP}	20	A
IEC61000-4-2 (ESD)	Air Contact	V_{ESD}	± 30 ± 30	KV
Operating Temperature Range		T_j	- 55 to +125	℃
Storage Temperature Range		T_{stg}	- 55 to + 150	℃

Characteristics at T_a = 25℃ unless otherwise specified

Parameter	Symbol	Min.	Max.	Unit
Reverse Stand-Off Voltage	V_{RWM}	-	12	V
Reverse Breakdown Voltage at I_R = 1 mA	$V_{(BR)R}$	13.3	-	V
Reverse Current at V_{RWM} = 12 V	I_R	-	0.5	μA
Forward Voltage at I_F = 10 mA	V_F	-	0.9	V
Clamping Voltage at I_{PP} = 1 A , tp = 8/20 μs at I_{PP} = 20 A , tp = 8/20 μs	V_C	- -	15 25	V
Junction Capacitance at V_R = 0 V, f = 1 MHz	C_j	-	200	pF

Electrical characteristic curves

Fig 1. Pulse Waveform

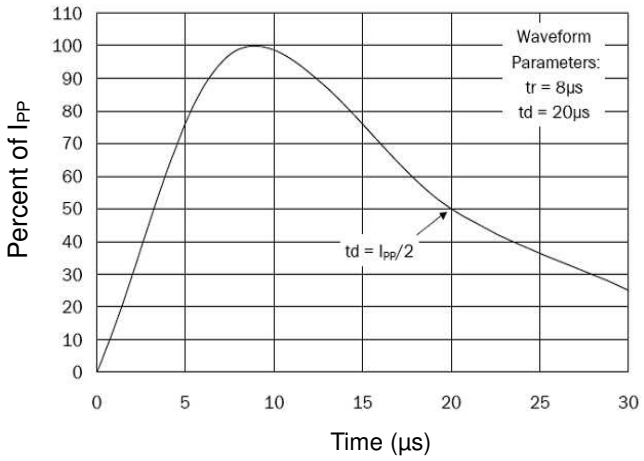


Fig 2. Power Derating Curve

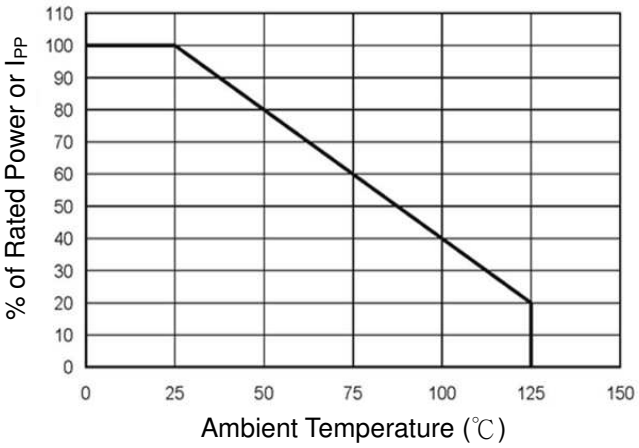


Fig 3. Clamping Voltage Curve

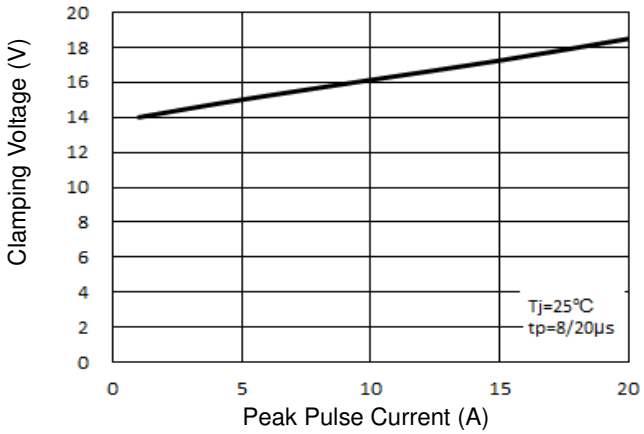


Fig 4. Junction Capacitance

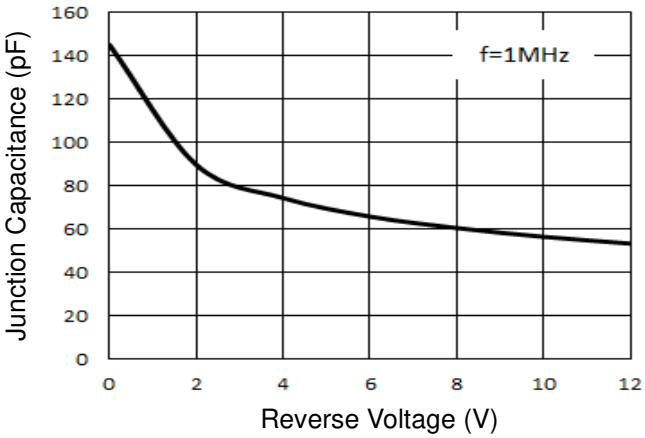
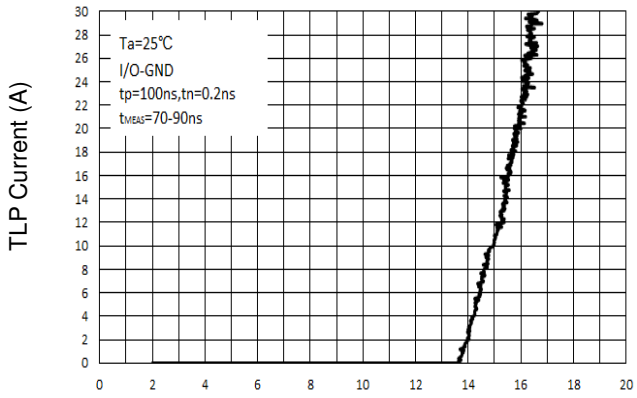
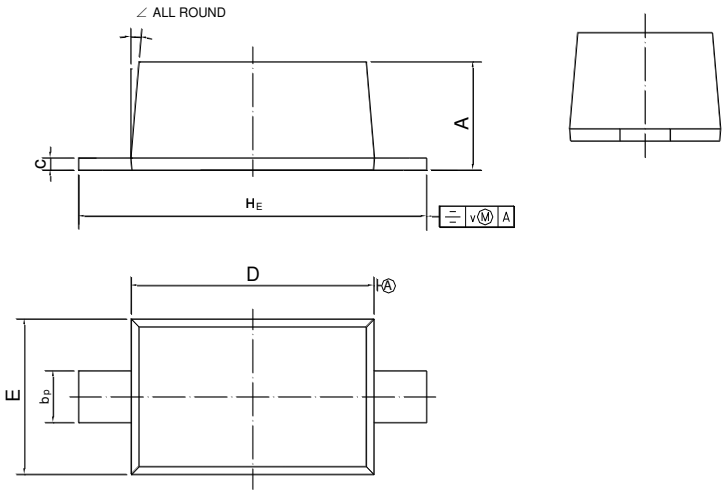


Fig. 5 TLP Curve



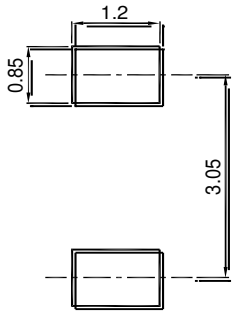
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads SOD-123F



UNIT	A	b_p	c	D	E	H_E	v	∠
mm	1.15 1.05	0.6 0.5	0.135 0.100	2.7 2.6	1.65 1.55	3.85 3.55	0.2	5°

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	(inch)	mm	(inch)	
SOD-123F	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" III " = Cathode line
" 2T " = Part No.
" • " = HAF (Halogen and Antimony Free)
Font type: Arial

