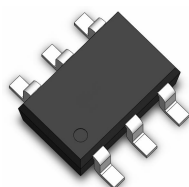


Transient Voltage Suppressors

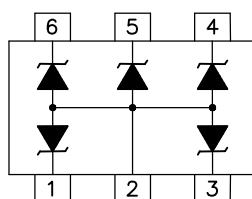
FEATURES:

- 5 Unidirectional Transil functions
- Breakdown voltage:
VBR = 6.1 V min. and 25 V min.
- Low leakage current: < 1 mA
- Very small PCB area < 4.2 mm² typically
- High ESD protection level: up to 25 kV

Circuit Diagram & Pin Configuration:



SOT-363



DEVICE MARKING AND ORDERING INFORMATION

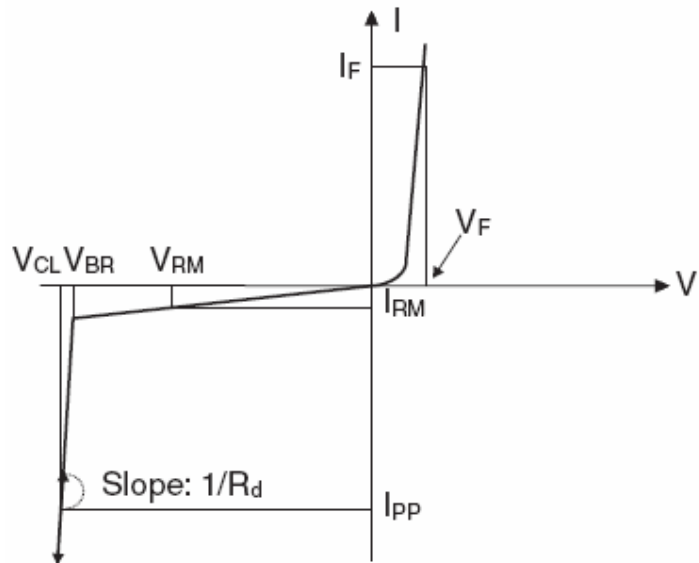
Device	Marking	Shipping
TESDN055AT36	WF	3000/Tape&Reel

Absolute Ratings (T_{amb}=25°C)

Symbol	Parameter	Value	Units
P _{PP}	Peak Pulse Power (t _p = 8/20μs)	100	W
T _L	Maximum lead temperature for soldering during 10s	260	°C
T _{stg}	Storage Temperature Range	-40 to +125	°C
T _{op}	Operating Temperature Range	-40 to +125	°C

Electrical Parameter

Symbol	Parameter
V_{RM}	Stand-off voltage
V_{BR}	Breakdown voltage
V_{CL}	Clamping voltage
I_{RM}	Leakage current
I_{PP}	Peak pulse current
I_R	Reverse current
I_F	Forward current
αT	Voltage temperature coefficient
V_F	Forward voltage drop
C	Capacitance
R_d	Dynamic



Electrical Characteristics

Part Numbers	V_{BR}		I_R	V_{RM}	I_{RM}	V_F	I_F	R_d	αT	C
	Min.	Max.				Max.		Typ. ⁽¹⁾	Max. ⁽²⁾	Typ. 0v bias
	v	v				v		Ω	$10^{-4}/^{\circ}C$	pF
TESDN055AT36	6.1	7.2	1	5	1	1.25	200	0.61	6	50

1. Square pulse $I_{PP}=15A, t_p=2.5\mu s$ 2. $V_{BR}=\alpha T*(T_{amb}-25^{\circ}C)*V_{BR}(25^{\circ}C)$

Typical Characteristics

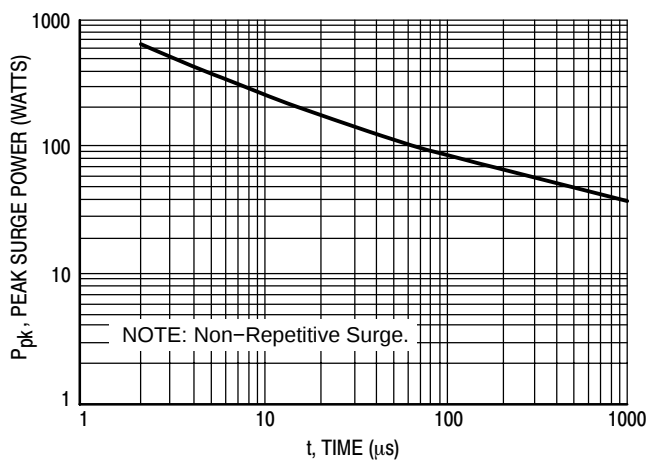


Figure 1. Pulse Width

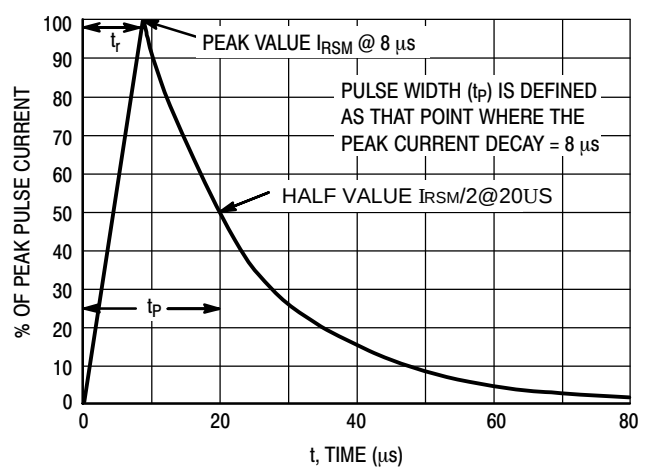


Figure 2. 8 x 20 μs Pulse Waveform

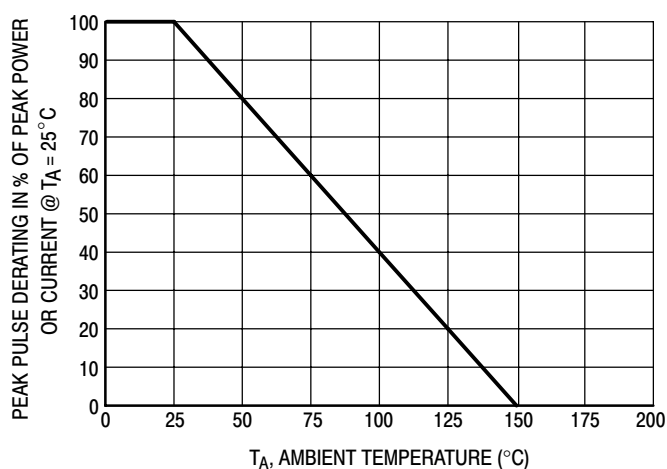


Figure 3. Pulse Derating Curve

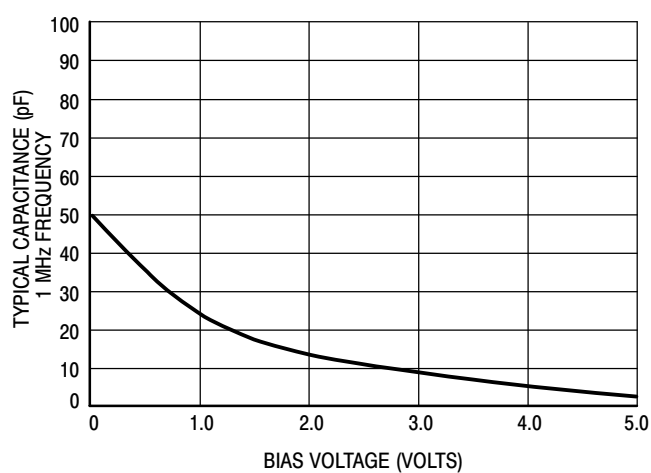


Figure 4. Capacitance

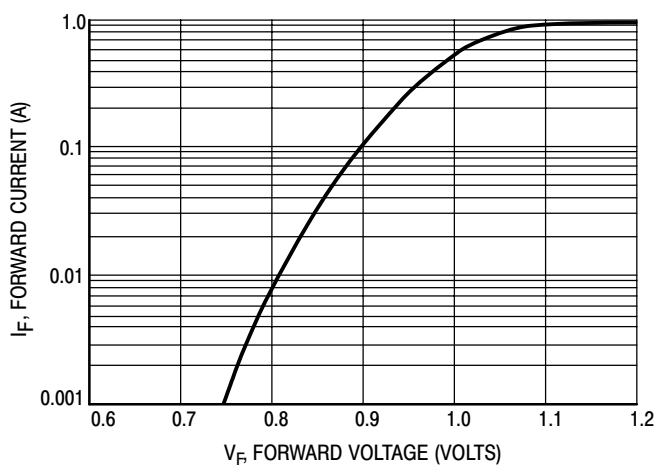


Figure 5. Forward Voltage

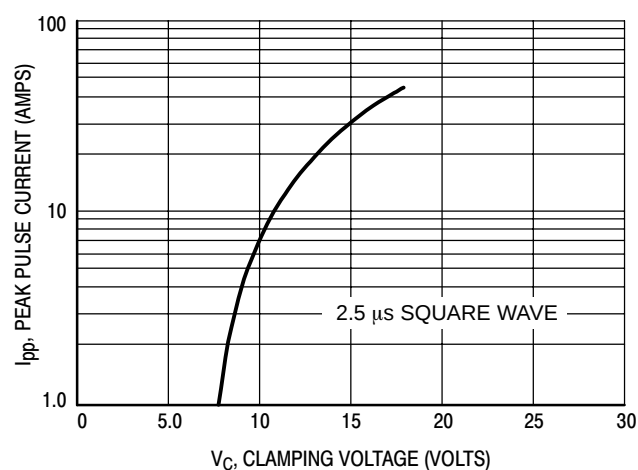
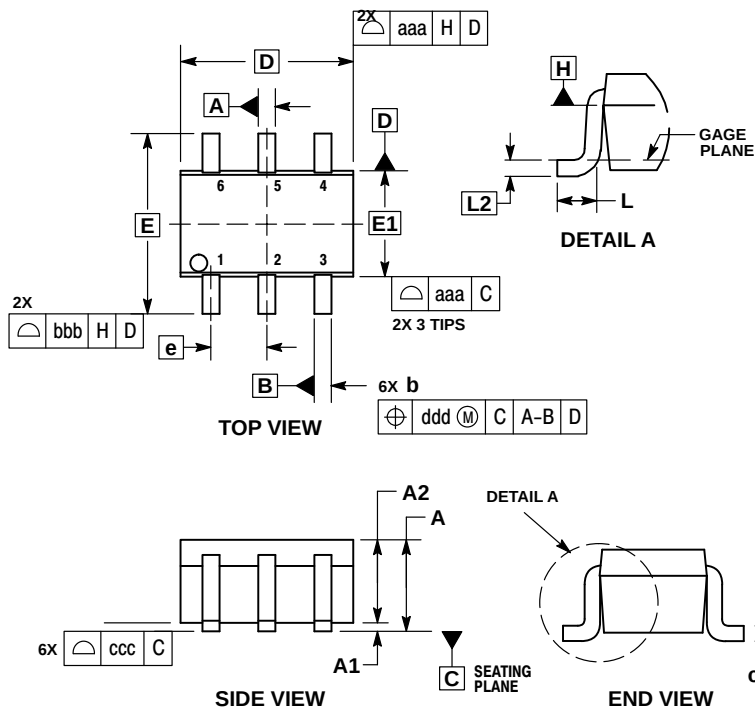


Figure 6. Clamping Voltage versus Peak Pulse Current (Reverse Direction)

SOT-363

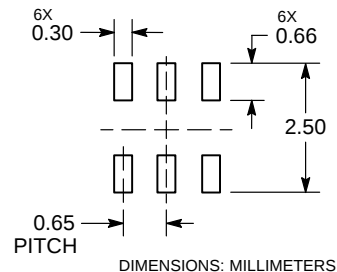


NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. DIMENSIONS D AND E1 DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS. MOLD FLASH, PROTRUSIONS, OR GATE BURRS SHALL NOT EXCEED 0.20 PER END.
4. DIMENSIONS D AND E1 AT THE OUTERMOST EXTREMES OF THE PLASTIC BODY AND DATUM H.
5. DATUMS A AND B ARE DETERMINED AT DATUM H.
6. DIMENSIONS b AND c APPLY TO THE FLAT SECTION OF THE LEAD BETWEEN 0.08 AND 0.15 FROM THE TIP.
7. DIMENSION b DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.08 TOTAL IN EXCESS OF DIMENSION b AT MAXIMUM MATERIAL CONDITION. THE DAMBAR CANNOT BE LOCATED ON THE LOWER RADIUS OF THE FOOT.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	---	---	1.10	---	---	0.043
A1	0.00	---	0.10	0.000	---	0.004
A2	0.70	0.90	1.00	0.027	0.035	0.039
b	0.15	0.20	0.25	0.006	0.008	0.010
C	0.08	0.15	0.22	0.003	0.006	0.009
D	1.80	2.00	2.20	0.070	0.078	0.086
E	2.00	2.10	2.20	0.078	0.082	0.086
E1	1.15	1.25	1.35	0.045	0.049	0.053
e	0.65 BSC			0.026 BSC		
L	0.26	0.36	0.46	0.010	0.014	0.018
L2	0.15 BSC			0.006 BSC		
aaa	0.15			0.006		
bbb	0.30			0.012		
ccc	0.10			0.004		
ddd	0.10			0.004		

RECOMMENDED SOLDERING FOOTPRINT*



NOTICE

The information presented in this document is for reference only. Tinysemi reserves the right to make changes without notice for the specification of the products displayed herein.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Tinysemi elec Co., Ltd., or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <http://www.tinysemi.com>, or consult your nearest Tinysemi's sales office for further assistance.