

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

## ESDA6V1W5-MS

Product specification

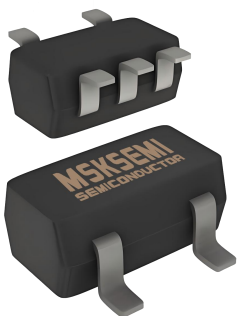
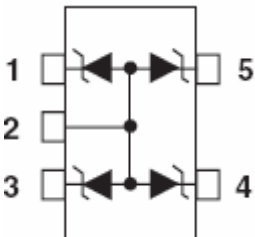

## Features

- 4 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 mm<sup>2</sup> typically
- High ESD protection level: up to 25 kV
- High integration
- Pb-Free Package is Available

## Applications

- Computers
- Printers
- Communication systems
- Cellular phones handsets and accessories
- Wireline and wireless telephone sets
- Set top boxes

## Reference News

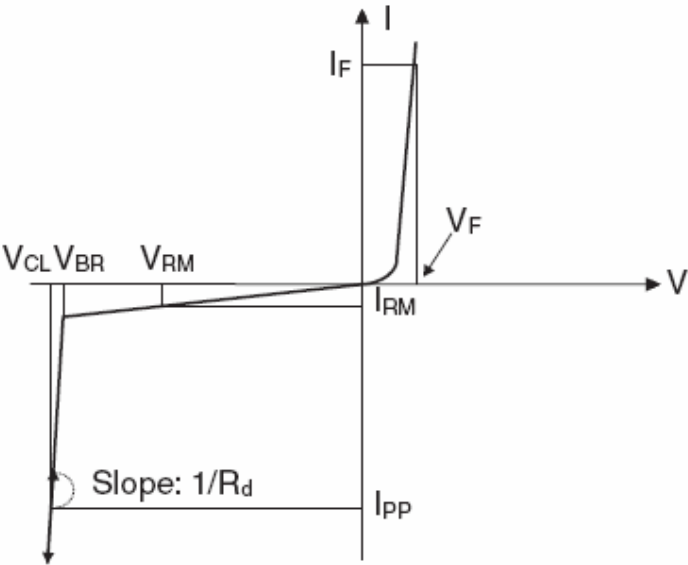
SOT-323-5	PIN Configuration	Marking
		

## Absolute Ratings (T<sub>amb</sub>=25°C )

Symbol	Parameter		Value	Units
P <sub>PP</sub>	Peak Pulse Power (t <sub>p</sub> = 8/20μs)	ESDA6V1W5-MS	150	W
T <sub>L</sub>	Maximum lead temperature for soldering during 10s		260	°C
T <sub>stg</sub>	Storage Temperature Range		-40 to +125	°C
T <sub>op</sub>	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
$\alpha T$	Voltage temperature coefficient
$V_F$	Forward voltage drop
C	Capacitance
$R_d$	Dynamic



Electrical Characteristics

Part Numbers	$V_{BR}$		$I_R$	$V_{RM}$	$I_{RM}$	$V_F$	$I_F$	$R_d$	$\alpha T$	C
	Min.	Max.				Max.		Typ. <sup>(1)</sup>	Max. <sup>(2)</sup>	Typ. 0v bias
	v	v				v		$\Omega$	$10^{-4}/^{\circ}C$	pF
ESDA6V1W5-MS	5.0	7.2	1	5	1	1.25	200	0.61	6	90

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

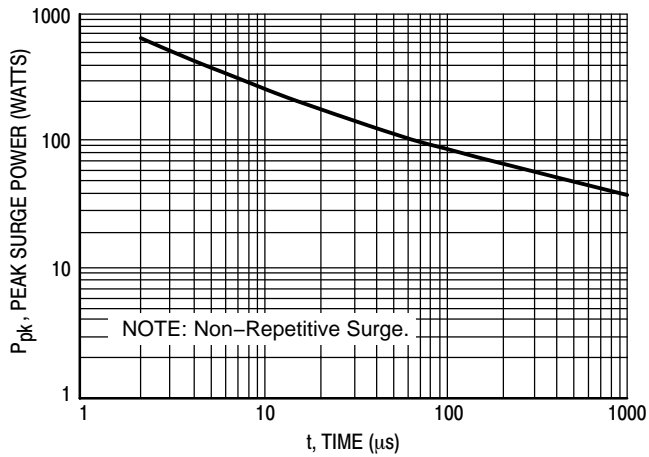


Figure 1. Pulse Width

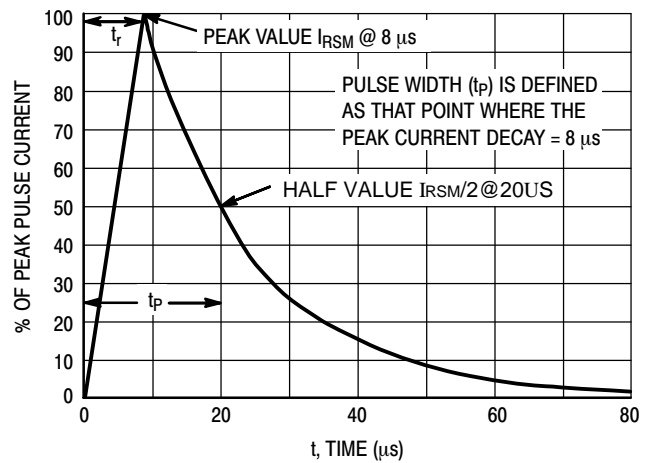


Figure 2. 8 x 20  $\mu s$  Pulse Waveform

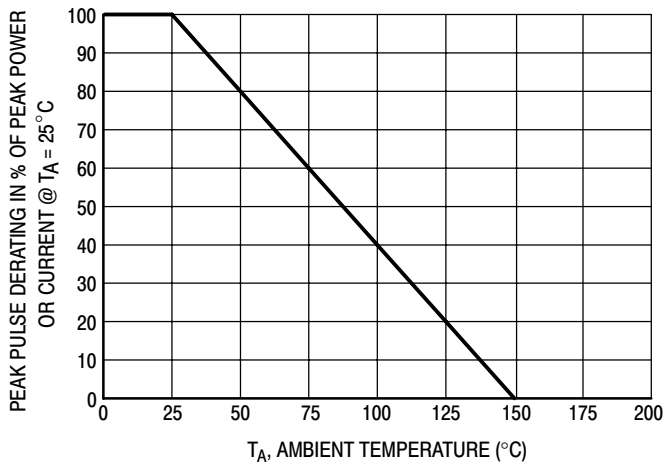


Figure 3. Pulse Derating Curve

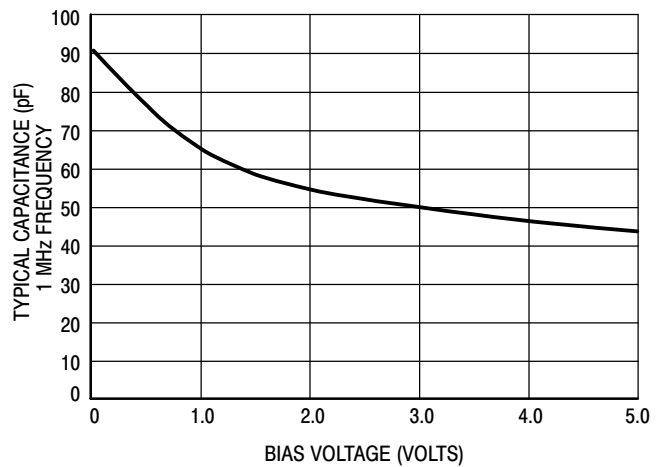


Figure 4. Capacitance

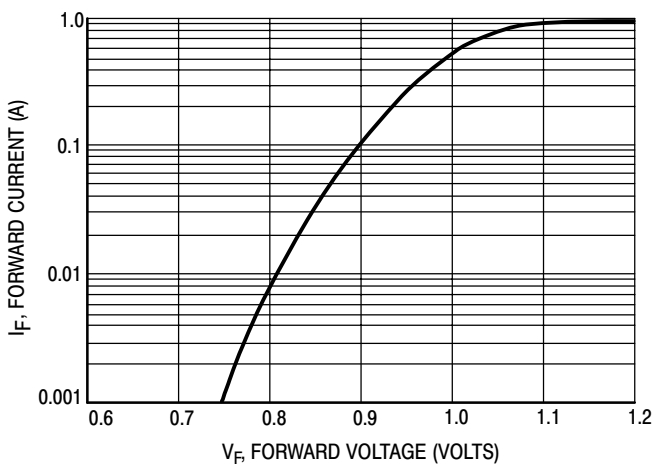


Figure 5. Forward Voltage

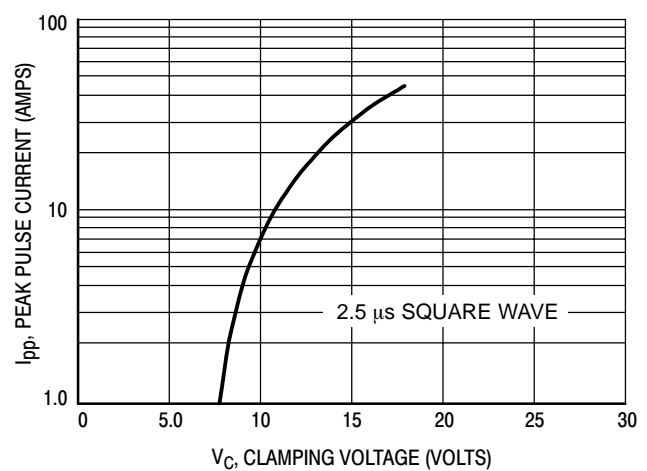
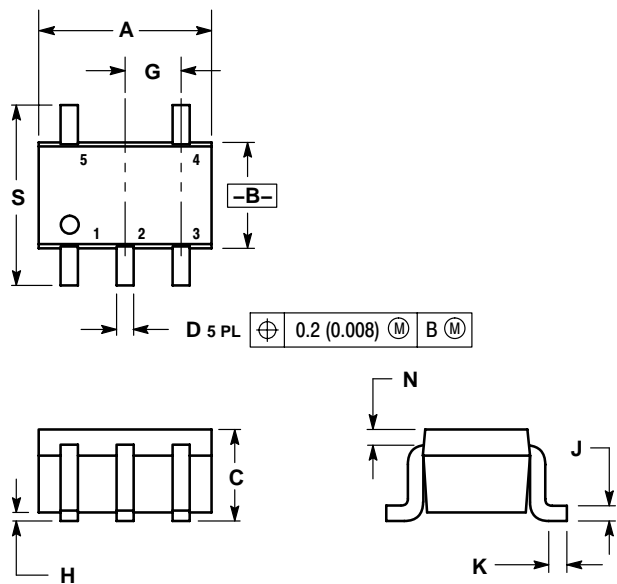


Figure 6. Clamping Voltage versus Peak Pulse Current (Reverse Direction)

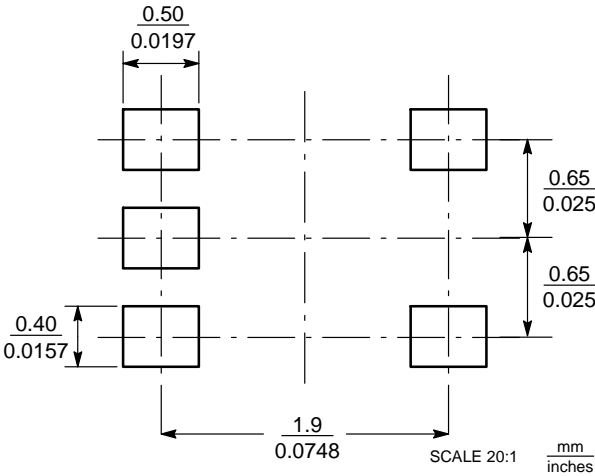
Package Outline Dimensions



- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
  2. CONTROLLING DIMENSION: INCH.
  3. 419A-01 OBSOLETE. NEW STANDARD 419A-02.
  4. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.071	0.	1.80	2.20
B	0.870.045	0.	1.15	1.35
C	0.530.031	0.	0.80	1.10
D	0.430.004	0.	0.10	0.30
G	0.12		0.65	BSC
H	0.026	0.004	---	0.10
J	0.004	0.	0.10	0.25
K	0.100.004	0.	0.10	0.30
N	0.12		0.20	REF
S	0.008	REF	2.00	2.20

Suggested Pad Layout



Order information

Orderable Device	Package	Packing Option
ESDA6V1W5-MS	SOT-323-5	3000PCS

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