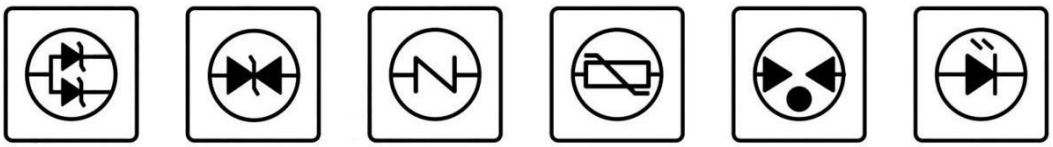
MSKSEMI 美森科
SEMICONDUCTOR



ESD05V02D-MS

Product specification

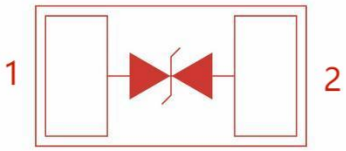
FEATURES

- Small Body Outline Dimensions: 0.61mm x 0.31 mm
- Low Body Height: 0.28 mm
- Low Leakage
- Response Time is Typically < 1 ns
- ESD Rating of Class 3 (> 16 kV) per Human Body Model
- IEC61000−4−2 Level 4 ESD Protection
- These are Pb−Free Devices
- We declare that the material of product compliance with RoHS requirements.

APPLICATIONS

- Cellular phones audio
- MP3 players
- Digital cameras
- Portable applicationss
- mobile telephone

Reference News

PACKAGE OUTLINE	PIN CONFIGURATION	Marking
 DFN0603		C *

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Air discharge Contact discharge		±25 ±20	kV kV
ESD Voltage Per Human Body Model		16	kV
Total Power Dissipation on FR-5 Board (Note 1) @ T_A=25℃	PD	200	mW
Junction and Storage Temperature Range	TJ,TSTG	-55 to 150	℃
Lead Solder Temperature–Maximum(10 Second Duration)	TL	260	℃

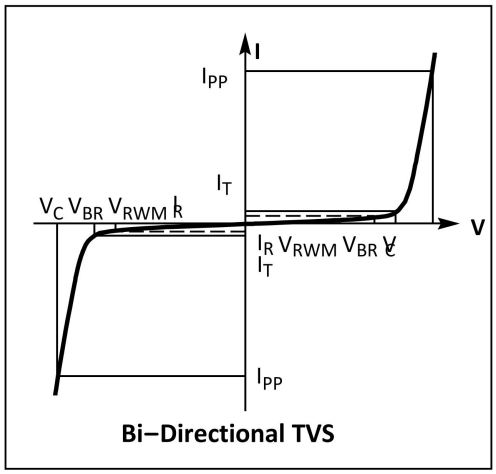
Stresses exceeding Maximum Ratings may damage the device. Maximum Rating are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. FR-5 = 1.0*0.75*0.62 in.

ELECTRICAL CHARACTERISTICS

(TA = 25℃unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
pk	Peak Power Dissipation
C	Capacitance @ V_R = 0 and f = 1.0 MHz



ELECTRICAL CHARACTERISTICS

Device	V_{RWM} (V)	I_{R1}(μA) @ V_{RWM}	I_{R2}(μA) @ V_R=5V	V_{BR} (V) @ I_T (Note 2)		I_T	V_C (V) @ I_{PP} = 1 A (Note 3)	V_C (V)@ MAX I_{PP} (Note 3)	I_{PP}(A) (Note 3)	P_{PK}(W) (Note 3)	C (pF)
	Max	Max	Max	Min	Max	A	Max	Max	Max	Max	Max
ESD05V02D-C	5.0	0.5	1	5.6	9.5	1.0	7.5	9.5	5	40	10

Other voltage available upon request.

2. V_{BR} is measured with a pulse test current IT at an ambient temperature of25℃

3. Surge current waveform per Figure 3.

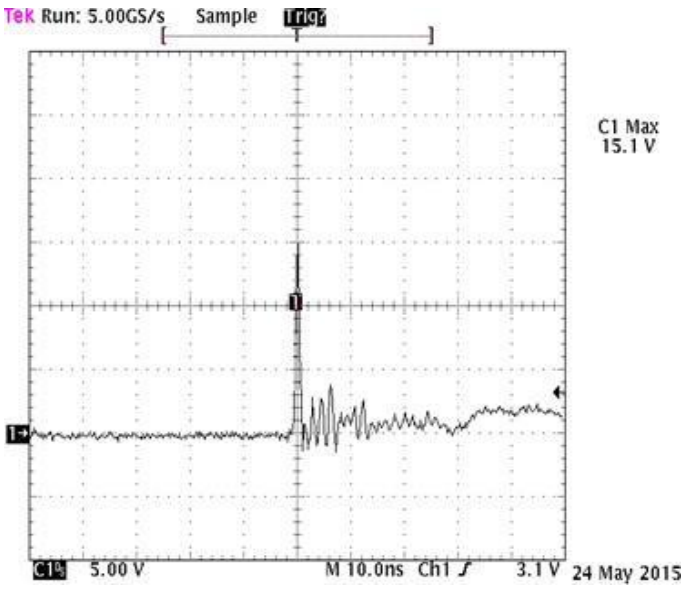


Fig1.ESDClampingVoltageScreenshotPositive8kV ContactperIEC61000-4-2

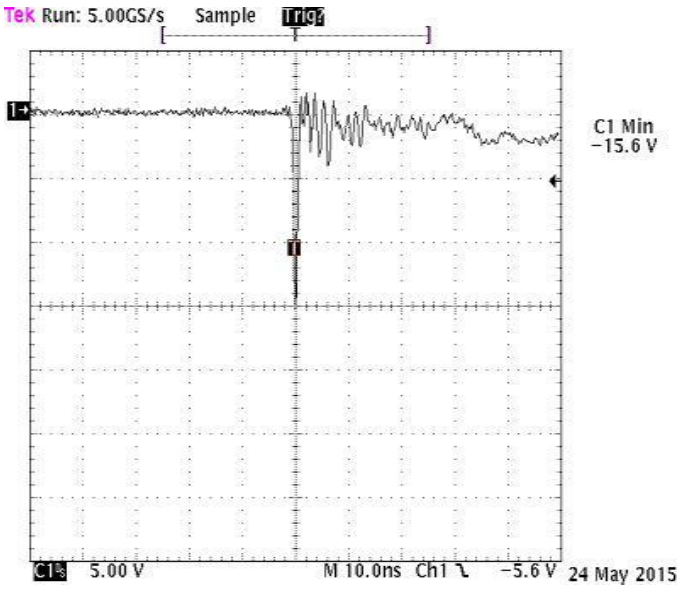


Fig2.ESDClampingVoltageScreenshotNegative8kV ContactperIEC61000-4-2

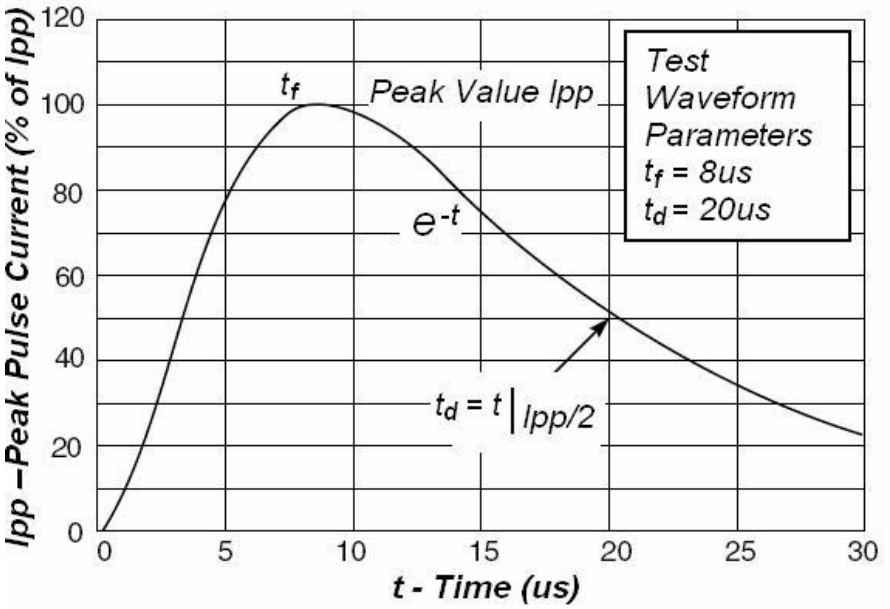
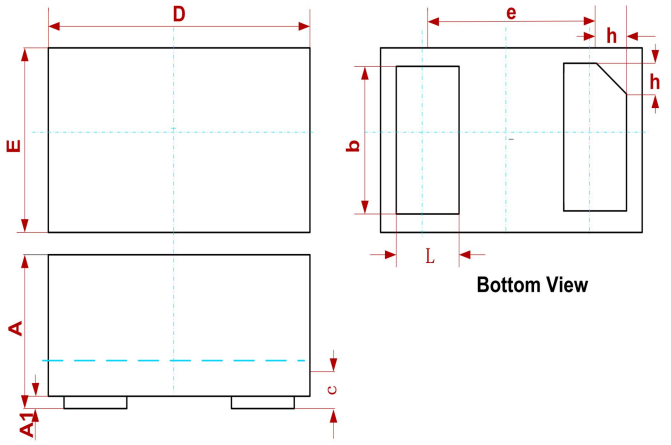


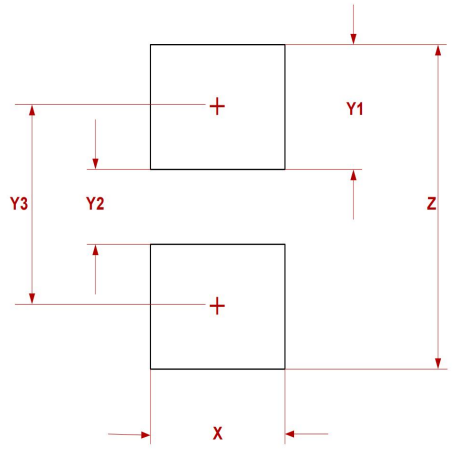
Fig3.PulseWaveform

PACKAGE MECHANICAL DATA



SYM	DIMENSIONS		
	MILLIMETERS		
	MIN	NOM	MAX
A	0.230		0.330
A1	0.000	0.020	0.050
b	0.215	0.245	0.275
c	0.120	0.150	0.180
D	0.550	0.600	0.650
e	0.355 BSC		
E	0.250	0.300	0.350
L	0.160	0.190	0.220
h	0.079 BSC		

Suggested Pad Layout



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	0.30	0.012
Y1	0.25	0.010
Y2	0.15	0.006
Y3	0.40	0.016
Z	0.65	0.026

REEL SPECIFICATION

P/N	PKG	QTY
ESD05V02D-MS	DFN0603	10000

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