

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

AZ5725-01F-MS

Product specification

GENERAL DESCRIPTION

The AZ5725-01F-MS Series is designed to protect voltage sensitive components from damage or latch-up due to ESD. Excellent clamping capability, low leakage , and fast response time provide best in class protection on designs that are exposed to ESD for board level. Because of its small size and bi-directional design, it is ideal for use in cellular phones, MP3 players, and portable applications that require audio line protection.

Features

- Small Body Outline Dimensions:
nom 0.039" x 0.024" (1.0x0.6mm)
- Low Body Height: nom 0.019" (0.5mm)
- Low Capacitance 15pF
- Low Clamping Voltage
- Reverse Working (Stand-off) Voltage: 5 V
- Low Leakage
- Response Time is Typically < 1 ns
- IEC61000-4-2 Level 4 ESD Protection
- This is a Pb-Free Device

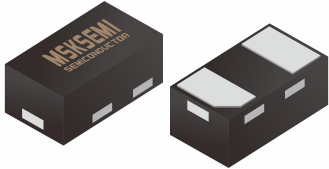
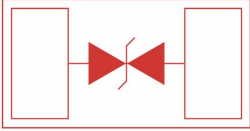

Mechanical Characteristics

- CASE: Void-free, transfer-molded, thermosetting plastic Epoxy Meets UL 94 V-0
- LEAD FINISH: NiPdAu
- MOUNTING POSITION: Any
- QUALIFIED MAX REFLOW TEMPERATURE: 260°C
- Device Meets MSL 1 Requirements
- RoHS/WEEE Compliant
- Marking: Marking code

Applications

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- MP3 Players

Reference News

PACKAGE OUTLINE	PIN Configuration	Marking
 <p>DFN1006</p>		

Maximum Ratings

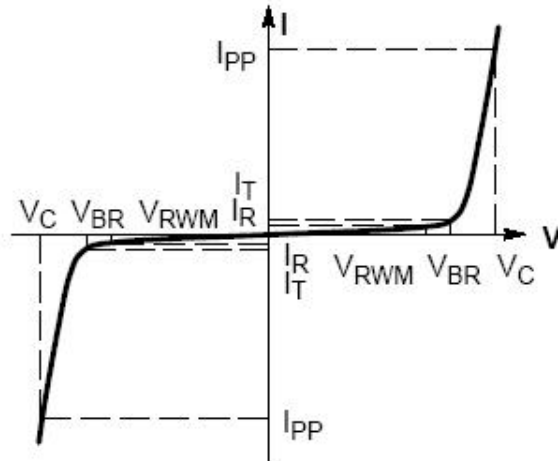
Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Contact		±30	kV
Peak Power Per 8 x 20µs Waveform	P _{PK}	70	W
Total Power Dissipation on FR-5 [®] Board @ TA = 25°C	P _D	300	mW
Junction and Storage Temperature Range	T _J , T _{stg}	-55 to +150	°C
Lead Solder Temperature - Maximum (10 Second Duration)	T _L	260	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings 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.
 Note1: FR-5 = 1.0*0.75*0.062inch (25.4*19.05*1.58mm).

ELECTRICAL CHARACTERISTICS

(T_A = 25°C 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}
I _T	Test Current
V _{BR}	Breakdown Voltage @ I _T
P _{PK}	Peak Power Dissipation
C	Max. Capacitance @ V _R = 0 and freq.=1 MHz



Bi-Directional TVS

ELECTRICAL CHARACTERISTICS

Device	V _{RWM} (V)	I _{R1} (µA) @ V _{RWM}	I _{R2} (µA) @ V _R =3.5V	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	mA	Max	Max	Max	Max	Max
AZ5725-01F-MS	5.0	0.5	0.3	5.6	8.0	1.0	9.8	12.5	8	69	15

1. Other voltage available upon request.
2. V_{BR} is measured with pulse test current I_T at an ambient temperature of 25°C
3. Surge current waveform per Figure 3.

TYPICAL CHARACTERISTICS

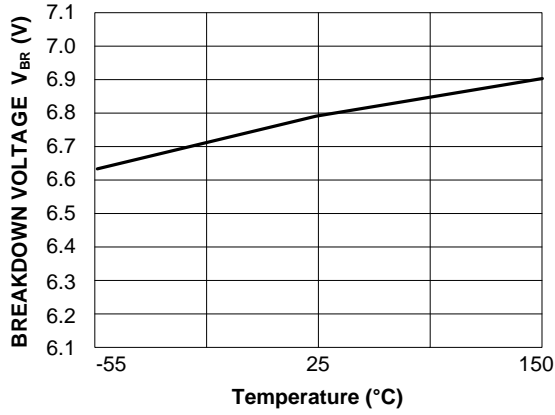


Figure 1: Typical Breakdown Voltage versus Temperature

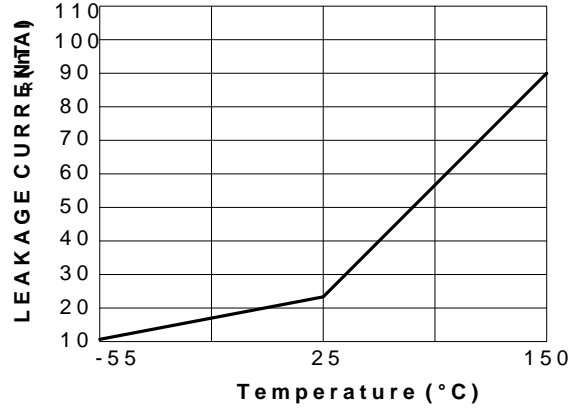


Figure 2: Typical Leakage Current versus Temperature

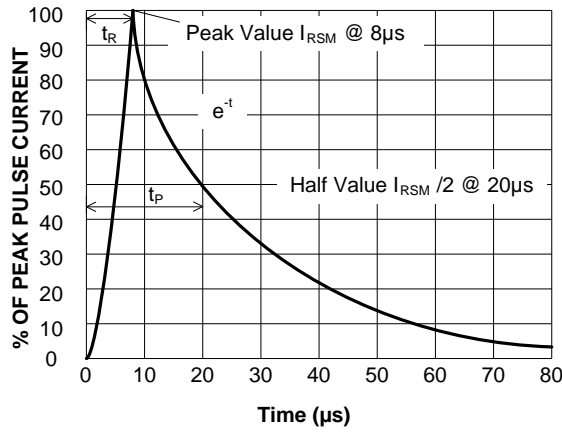
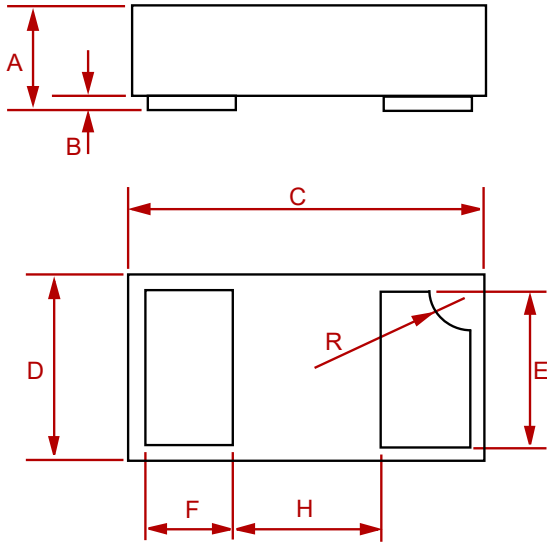


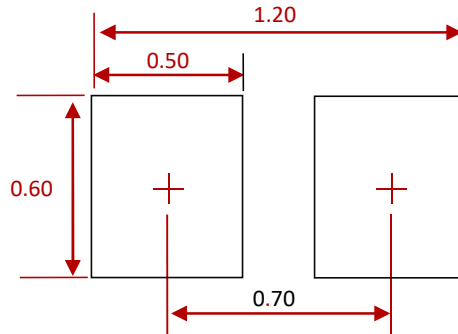
Figure 3: 8/20µs Pulse Wave Form

PACKAGE MECHANICAL DATA



Dim	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.0125	0.02	0.32	0.52
B	0.000	0.002	0.00	0.05
C	0.037	0.043	0.95	1.080
D	0.022	0.027	0.55	0.680
E	0.016	0.024	0.40	0.60
F	0.008	0.012	0.20	0.30
H	0.015Typ.		0.40Typ.	
R	0.001	0.005	0.05	0.15

Suggested Pad Layout



NOTES:

1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY. CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.

REEL SPECIFICATION

P/N	PKG	QTY
AZ5725-01F-MS	DF1006	10000

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