

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

Product data sheet

www.msksemi.com

Feature

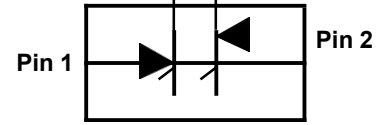
- 80W peak pulse power per line ($t_p = 8/20\mu s$)
- DFN1006-2L package
- Replacement for MLV(0402)
- Bidirectional configurations
- Response time is typically $< 1ns$
- Low clamping voltage
- RoHS compliant
- Transient protection for data lines to IEC61000-4-2(ESD) $\pm 30KV$ (air), $\pm 30KV$ (contact); IEC61000-4-4 (EFT) 40A (5/50ns)

Applications

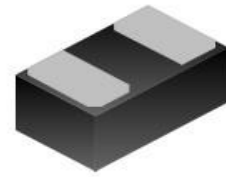
- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

Mechanical Characteristics

- Mounting position: Any
- Qualified max reflow temperature: $260^{\circ}C$
- Device meets MSL 1 requirements
- DFN1006-2L without plating



Circuit Diagram



DFN1006

Absolute maximum rating@25°C

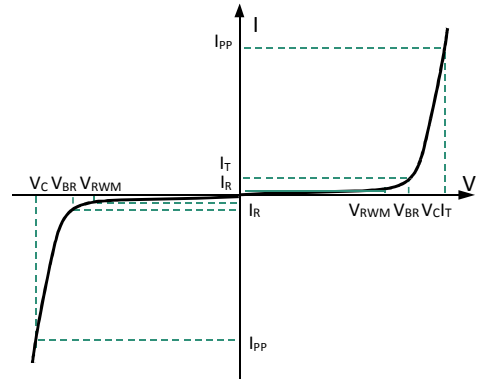
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{pp}	80	W
Peak Pulse Current ($t_p=8/20\mu s$)	I_{pp}	8	A
Operating Temperature	T_J	-55 to 150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}C$

Electrical characteristics per line@25°C (unless otherwise specified)

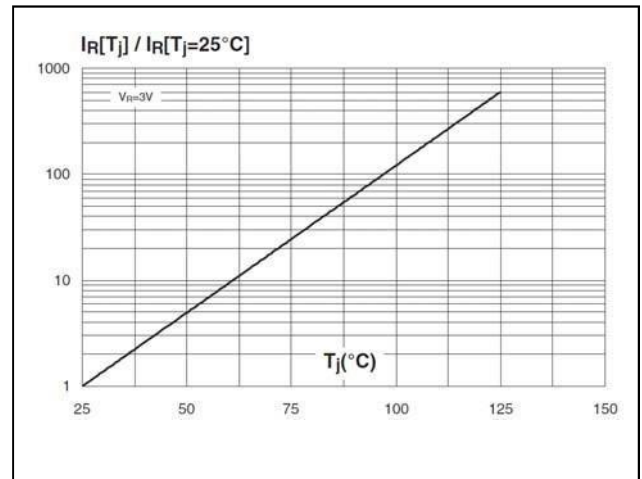
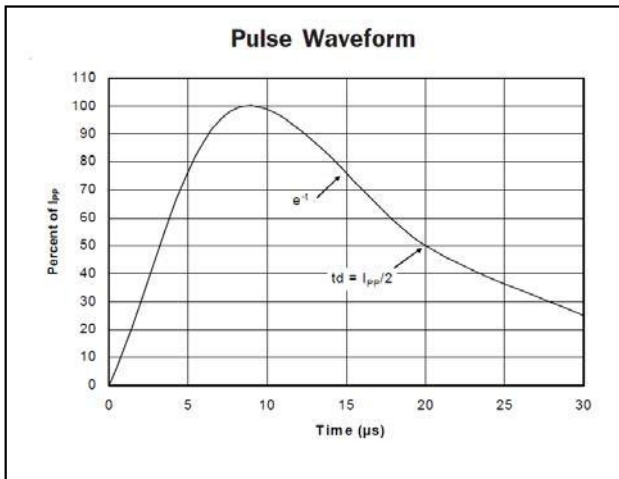
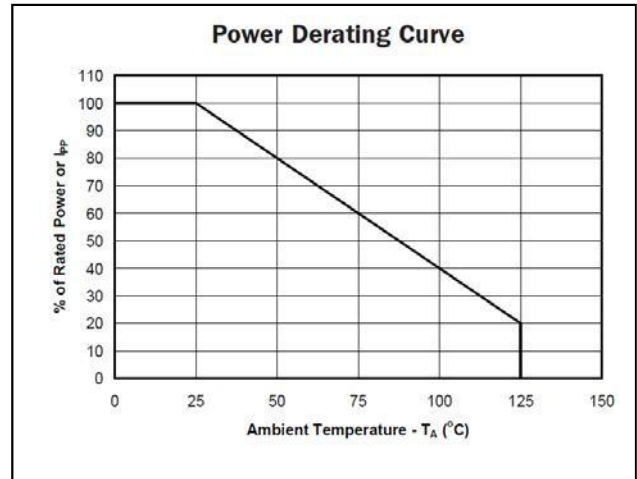
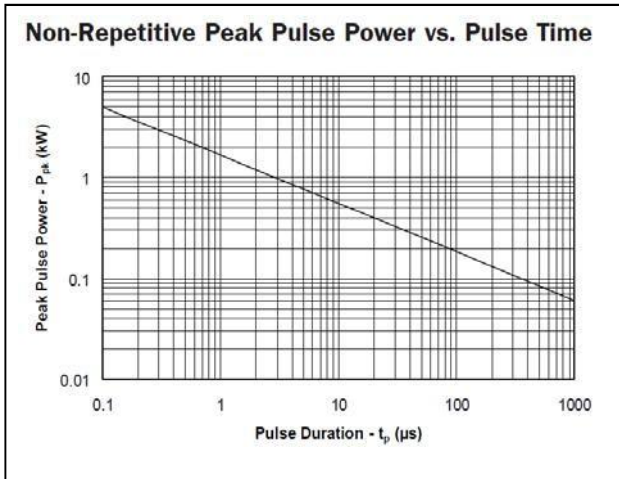
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Peak Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	$I_t = 1mA$	5.6	7.0	7.8	V
Reverse Leakage Current	I_R	$V_{RWM} = 5V T=25^{\circ}C$			1.0	μA
Clamping Voltage	V_{CL}	$I_{PP}=16A t_p=100ns$		10.5		V
Clamping Voltage	V_C	$I_{PP}=1A$		7.5	8.0	V
Clamping Voltage	V_C	$I_{PP}=3A$		8.0	9.0	V
Clamping Voltage	V_C	$I_{PP}=8A$		8.5	10	V
Junction Capacitance	C_j	$V_R=0V f = 1MHz$		30		pF

Electronics Parameter

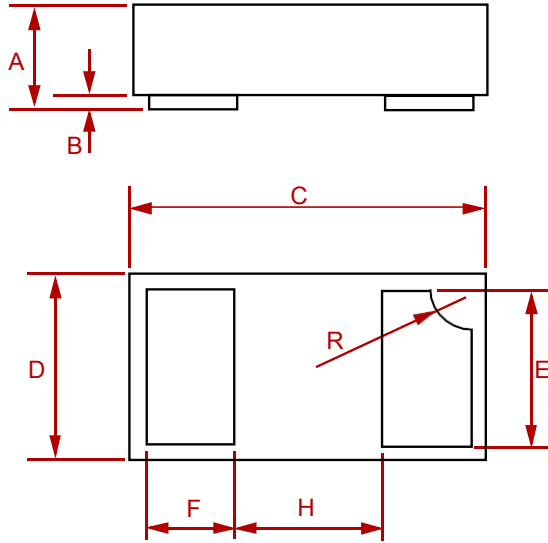
Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
P_{PP}	Peak Pulse Power
C_J	Junction Capacitance



Typical Characteristics @ $T_a=25^\circ\text{C}$ unless otherwise specified

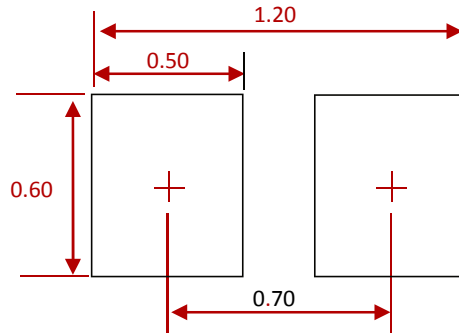


PACKAGE MECHANICAL DATA



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
MSAZ5825-01F	DFN1006	10000

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