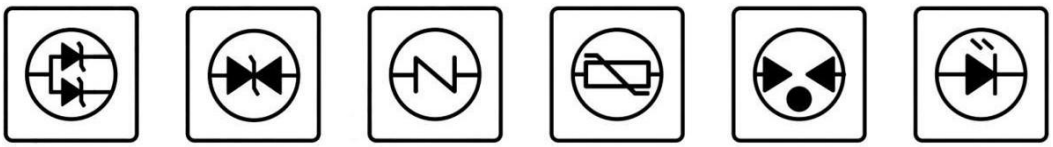
MSKSEMI 美森科
SEMICONDUCTOR



AZ9143-04F-MS

Product specification

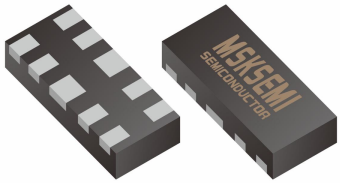
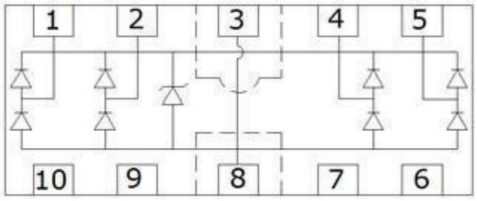
Features

- 150 Watts peak pulse power (tp = 8/20μs)
- Transient protection for high speed data lines to
  IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
  IEC 61000-4-4 (EFT) 40A(5/50ns)
- Working voltages : 3.3V
- Protects two or four I/O lines
- Ultra Low capacitance:0.3pf (typical between I/O channel)
- Low operating and clamping voltages
- Solid-state silicon avalanche technology

Applications

- High Definition Multi-Media Interface (HDMI)
- USB 1.1/2.0/3.0/OTG
- IEEE 1394 Firewire Ports
- Projection TV Monitors and Flat PanelDisplays
- Notebook Computers
- Set Top Box

Reference News

PACKAGE OUTLINE	Pin Configuration	Marking
		
DFN2510		

Maximum Rating @ Ta=25C unless otherwise specified

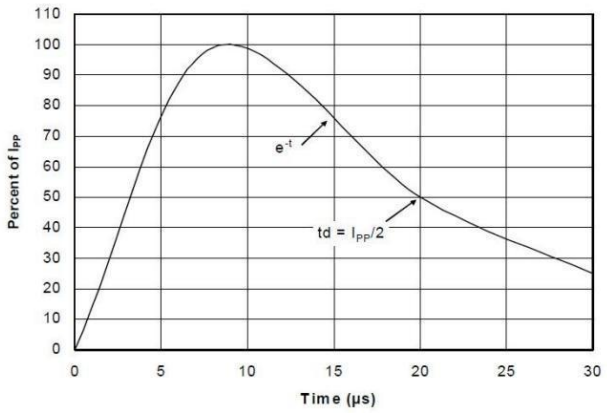
Symbol	Parameter	Ratings	Units
P_{PK}	Peak Pulse Power (tp = 8/20μs)	150	Watts
T_L	Lead Soldering Temperature	260(10sec.)	℃
T_J	Operating Temperature	-55 to + 125	℃
T_{STG}	Storage Temperature	-55 to + 150	℃

Electrical Characteristics@ Ta=25C unless otherwise

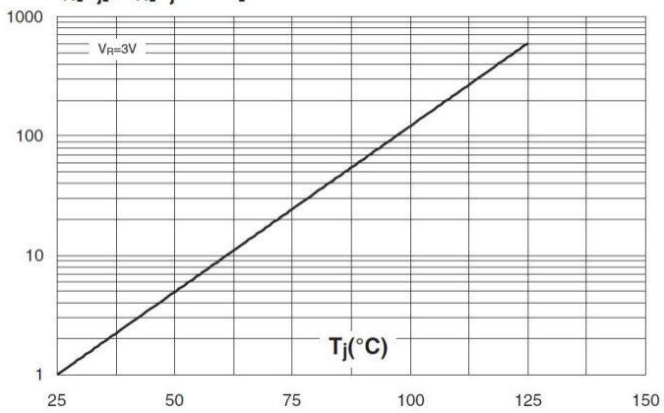
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V_{RWM}	Reverse Working Voltage	Any I/O to Ground		3.3		V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA, Any I/O to Ground	4.5			V
I_R	Reverse Leakage Current	V_{RWM} = 5V, Any I/O to Ground			1	μA
V_F	Diode Forward Voltage	I_F = 15mA		0.85	1.2	V
V_C	Clamping Voltage	I_{PP} = 1A, tp =8/20μs, any I/O pin to Ground			9.8	V
		I_{PP} = 5A, tp =8/20μs, any I/O pin to Ground			15	V
C_J	Junction Capacitance	V_R = 0V, f = 1MHz, between I/O pins		0.25	0.3	pF
		V_R = 0V, f = 1MHz, any I/O pin to Ground		0.5	0.6	pF

TypicalCharacteristics@Ta=25℃unlessotherwisespecified

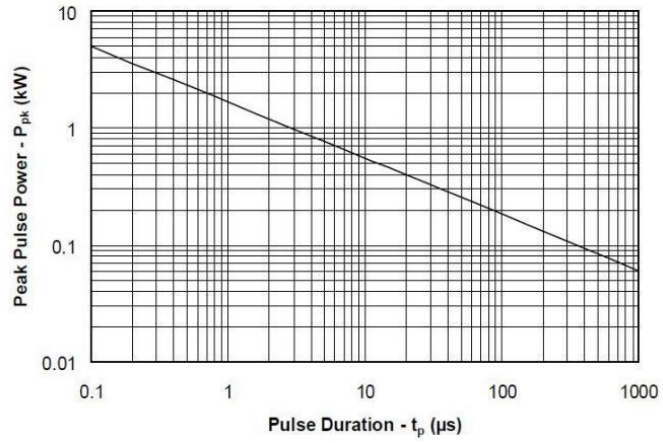
Pulse Waveform



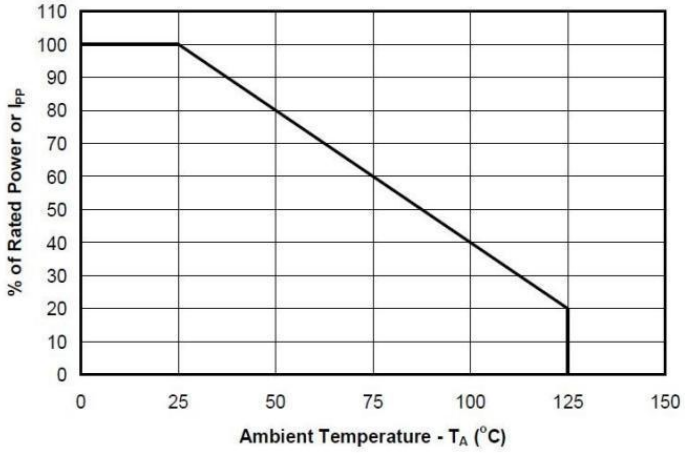
IR[Tj] / IR[Tj=25°C]



Non-Repetitive Peak Pulse Power vs. Pulse Time

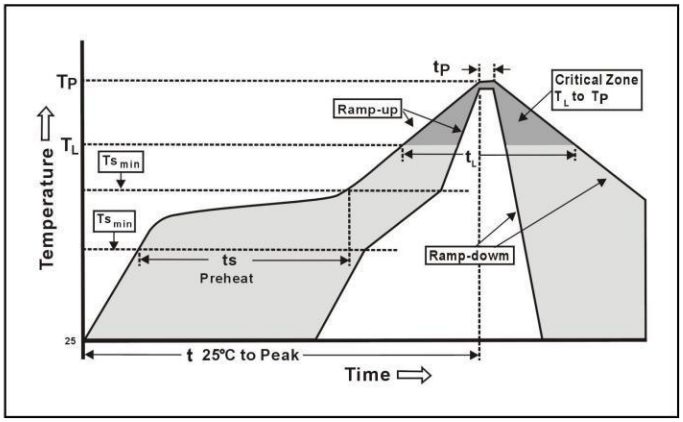


Power Derating Curve

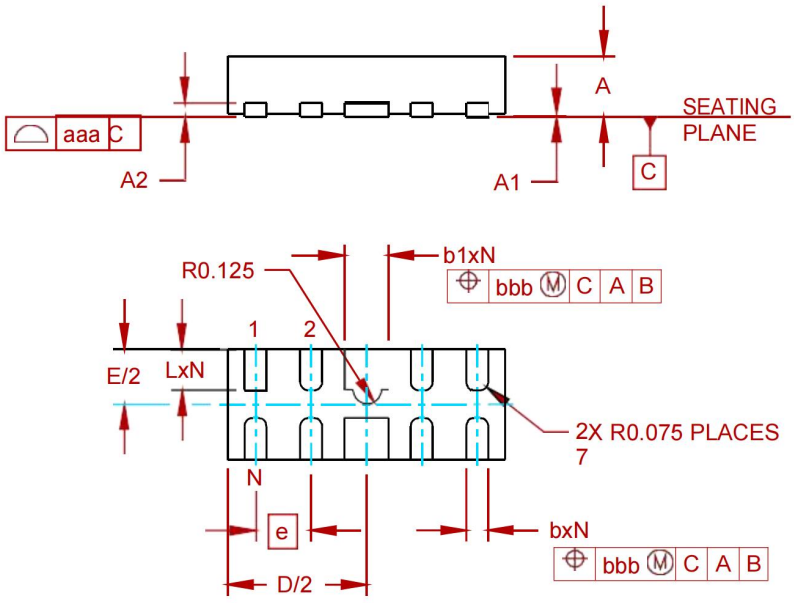


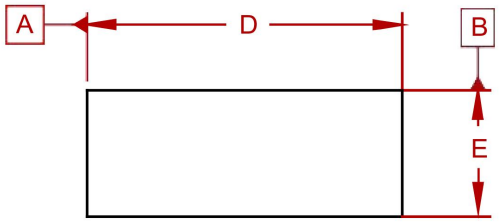
Soldering Parameters

Reflow Condition		Fb – Free assembly
Pre Heat	-Temperature Min ($T_{s(Min)}$)	150°C
	-Temperature Max ($T_{s(Max)}$)	200°C
	-Time (Min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus) Temp (T_L) to peak		3°C/second Max
$T_{S(Max)}$ to T_L - Ramp-up Rate		3°C/second Max
Reflow	-Temperature (T_L) (Liquidus)	217°C
	-Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_p)		$250^{+0/-5}$ °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-dowm Rate		6°C/second Max
Time 25°C to peak Temperature (T_p)		8 minutes Max.
Do not exceed		260°C



PACKAGE MECHANICAL DATA

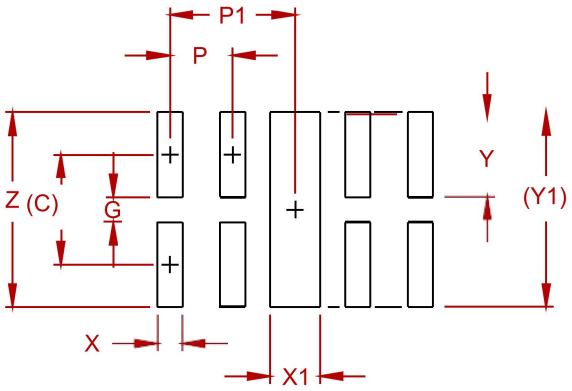




Dimensions in millimeters

DIM	DIMENSIONS					
	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.020	.023	.026	0.50	0.58	0.65
A1	0.00	.001	.002	0.00	0.03	0.05
A2		(.005)			(0. 13)	
b	.006	.008	.010	0. 15	0.20	0.25
b1	.014	.016	.018	0.35	0.40	0.45
D	.094	.098	. 102	2.40	2.50	2.60
E	.035	.039	.043	0.90	1.00	1. 10
e	.020 BSC			0.50 BSC		
L	.012	.015	.017	0.30	0.38	0.425
N	8			8		
aaa	.003			0.08		
bbb	.004			0. 10		

Suggested Pad Layout



DIM	DIMENSIONS	
	INCHES	MILLIMETERS
C	(.034)	(0.875)
G	.008	0.20
P	.020	0.50
P1	.039	1.00
X	.008	0.20
X1	.016	0.40
Y	.027	0.675
Y1	(.061)	(1.55)
Z	.061	1.55

Note:

1.Controlling dimension:in millimeters.

2.General tolerance:±0.05mm.

3.The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
AZ9143-04F-MS	DFN2510	3000

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