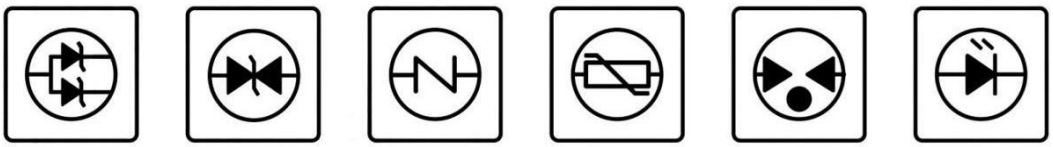
MSKSEMI 美森科
SEMICONDUCTOR



AZ9143-08F

Product specification

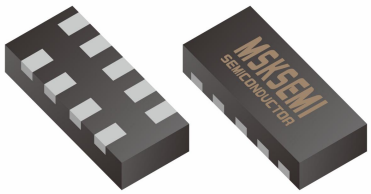
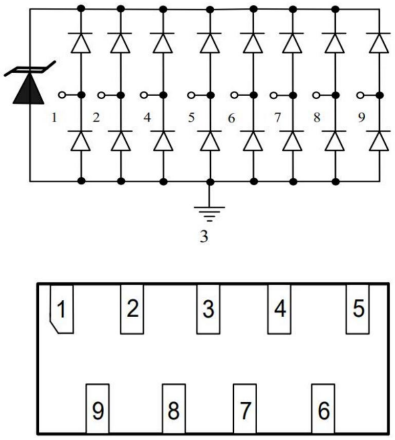
Features

- 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 eight I/O lines
- Low operating and clamping voltages
- Solid-state silicon avalanche technology

Application

- Notebooks, Desktops, Servers and Video Graphics Cards
- USB Power & Data Line Protection
- Monitors and Flat Panel Displays
- I²C Bus Protection
- Portable Instrumentation
- Set Top Box

Reference News

PACKAGE OUTLINE	Pin Configuration	Marking
 DFN3810-9L		

Maximum Rating @ Ta=25℃ unless otherwise specified

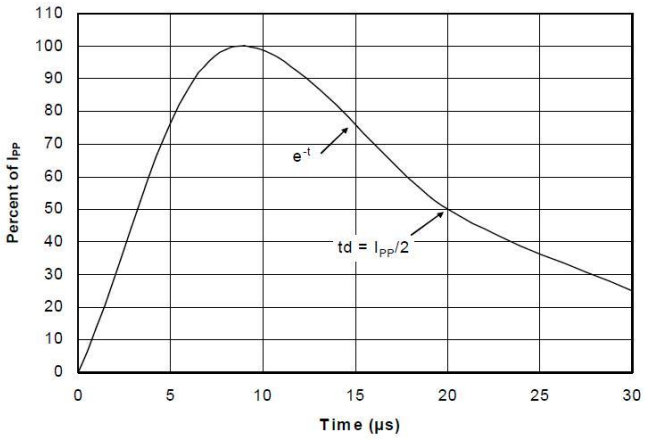
Symbol	Parameter	Ratings	Units
P_{PK}	Peak Pulse Power (tp = 8/20μs)	150	Watts
T_L	Lead Soldering Temperature	260(10sec.)	℃
T_J	Operating Temperature	-55 to + 125	℃
T_{STG}	Storage Temperature	-55 to + 150	℃

Electrical Characteristics@ Ta=25℃ unless otherwise

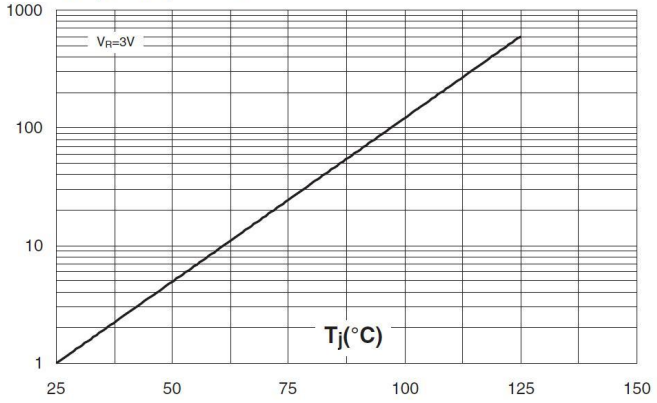
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V_{RWM}	Reverse Working Voltage	Any I/O to Ground			3.3	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA, Any I/O to Ground	4.5			V
I_R	Reverse Leakage Current	V_{RWM} = 5V, Any I/O to Ground			1	μA
V_C	Clamping Voltage	I_{PP} = 1A, tp =8/20μs, any I/O pin to Ground			9.8	V
		I_{PP} = 3A, tp =8/20μs, any I/O pin to Ground			15	V
C_J	Junction Capacitance	V_R = 0V, f =1MHz, between I/O pins		0.3	0.5	pF
		V_R = 0V, f =1MHz, any I/O pin to Ground		0.5	0.8	pF

Typical Characteristics@ Ta=25℃ unless otherwise specified

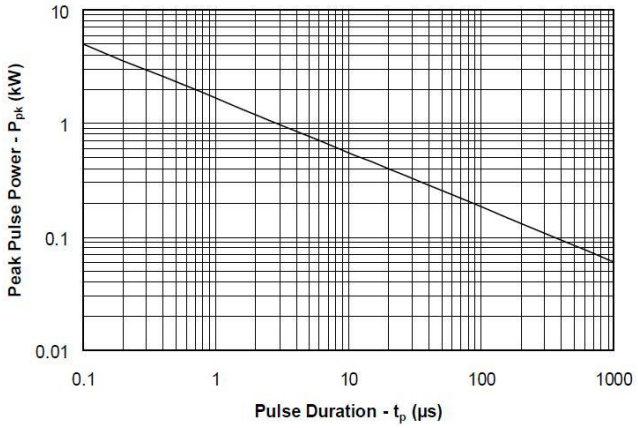
Pulse Waveform



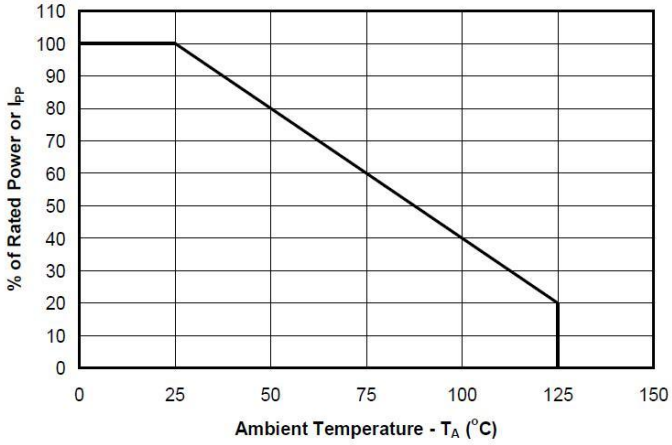
$I_R[T_j]$ / $I_R[T_j=25°C]$



Non-Repetitive Peak Pulse Power vs. Pulse Time

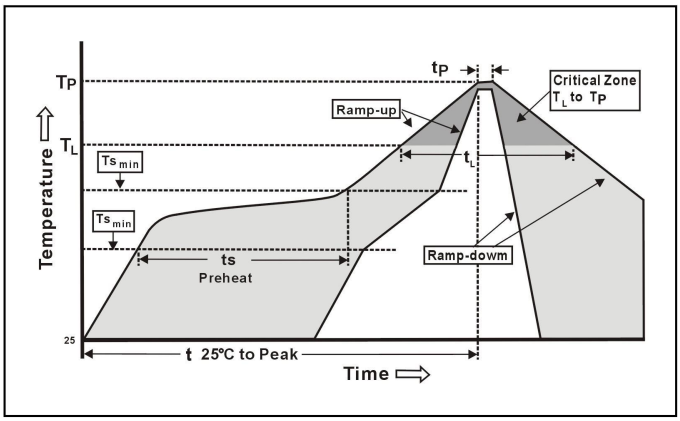


Power Derating Curve



Soldering Parameters

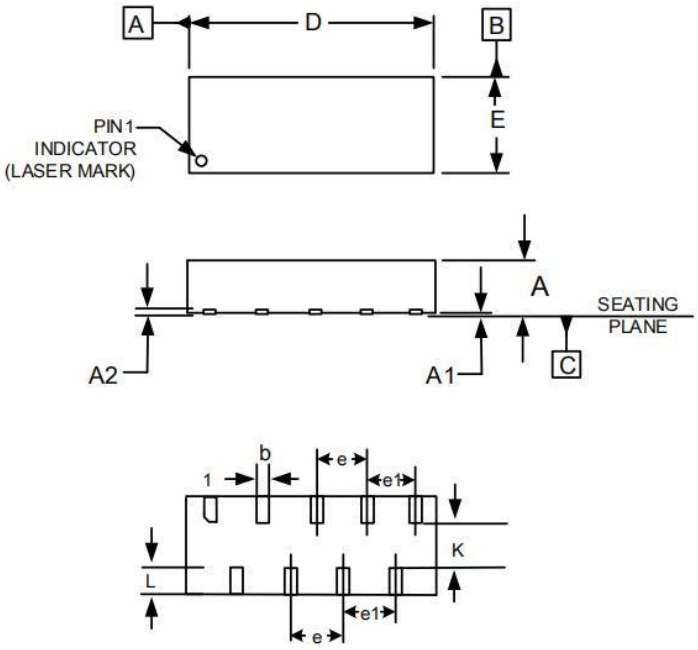
Reflow Condition		Fb – Free assembly
Pre Heat	-Temperature Min ($T_{s(Min)}$)	150°C
	-Temperature Max ($T_{s(Max)}$)	200°C
	-Time (Min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus) Temp (T_L) to peak		3°C/second Max
$T_{S(Max)}$ to T_L - Ramp-up Rate		3°C/second Max
Reflow	-Temperature (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 Outline

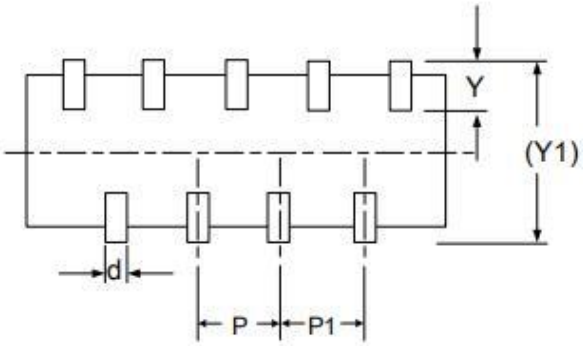
Plastic surface mounted package

DFN3810



DIM	MILLIMETERS		
	MIN	NOM	MAX
D	3.70	3.80	3.90
E	0.90	1.00	1.10
A	0.45	0.50	0.55
A1	0.00	0.02	0.05
A2	0.10	0.15	0.20
b	0.15	0.20	0.25
e	0.80BSC		
e1	0.90BSC		
L	0.20	0.30	0.40

Soldering Footprint



DIMENSIONS		
DIM	INCHES	MILLIMETERS
P	0.031	0.80
P1	0.035	0.90
d	0.012	0.30
Y	0.024	0.60
Y1	0.061	1.55

PackageAndMarkingInformation

P/N	PKG	QTY
AZ9143-08F	DFN3810	3000

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