

Features

- 60Watts peak pulse power ($t_p = 8/20\mu s$)
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ($C_j = 0.2pF$ typ. I/O to I/O)
- IEC 61000-4-2 $\pm 20kV$ contact $\pm 25kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4.5A (8/20 μs)

Applications

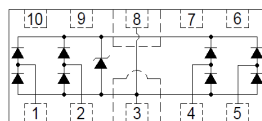
- USB3.0, USB2.0, Ethernet
- HDMI 2.0, Displayport 1.3, eSATA
- Unified Display interface
- Digital Visual Interface
- High speed serial interface

Mechanical Data

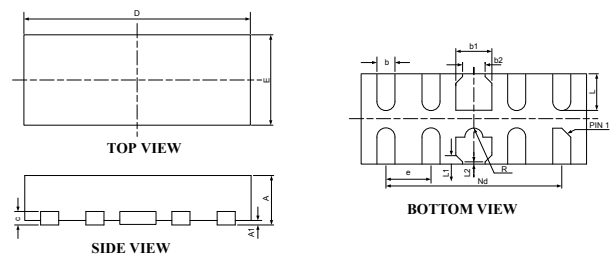
- Tiny DFN10L (2.5mmx1.0mm) package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant



Schematic & PIN Configuration



DFN2510 - 10



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.018	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.15	0.20	0.25	0.006	0.008	0.010
b1	0.35	0.40	0.45	0.014	0.016	0.018
b2	0.20	0.25	0.30	0.008	0.010	0.012
c	0.10	0.15	0.20	0.004	0.006	0.008
D	2.45	2.50	2.55	0.098	0.100	0.102
e	0.50BSC			0.020BSC		
Nd	2.00BSC			0.080BSC		
E	0.95	1.00	1.05	0.038	0.040	0.042
L	0.35	0.40	0.45	0.014	0.016	0.018
L1	0.075REF			0.003REF		
L2	0.050REF			0.002REF		
h	0.08	0.12	0.15	0.003	0.005	0.006
R	0.05	0.10	0.15	0.002	0.004	0.006

Dimensions in inches and (millimeters)

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	60	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{PP}	4.5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	25 20	kV
Lead Soldering Temperature	T_L	260(10seconds)	$^{\circ}C$
Junction Temperature	T_J	-55 to + 125	$^{\circ}C$
Storage Temperature	T_{stg}	-55 to + 125	$^{\circ}C$

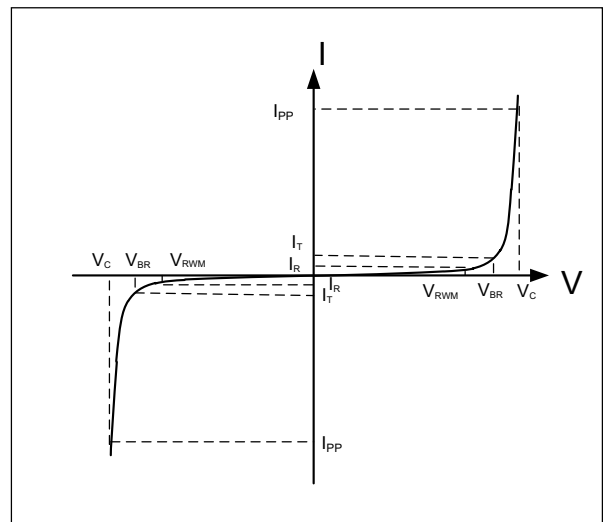
AZ1045-04F

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6.0			V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^{\circ}C$			100	μA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu s$			4.5	A
Clamping Voltage	V_C	$I_{PP}=4A, t_p=8/20\mu s$		13		V
Clamping Voltage	V_{CL}	$I_{PP}=16A, t_p=TLP$		22		V
Junction Capacitance	C_j	$V_R=0V, f=1MHz$ I/O to I/O		0.2		pF
		$V_R=0V, f=1MHz$ I/O to GND		0.4		

Electrical Parameters (TA = 25°C unless otherwise noted)

	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



Note: .8/20 μs pulse waveform.

RATING AND CHARACTERISTIC CURVES (AZ1045-04F)

Fig.1 Peak Pulse Power Rating Curve

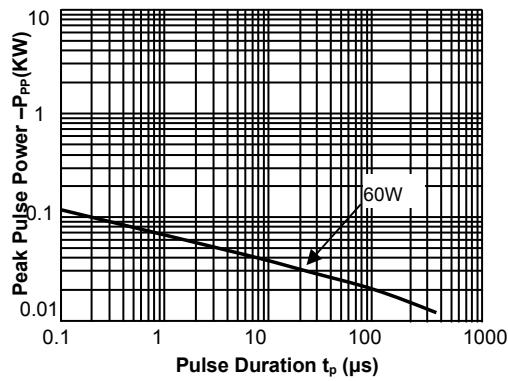


Fig.2 Pulse Derating Curve

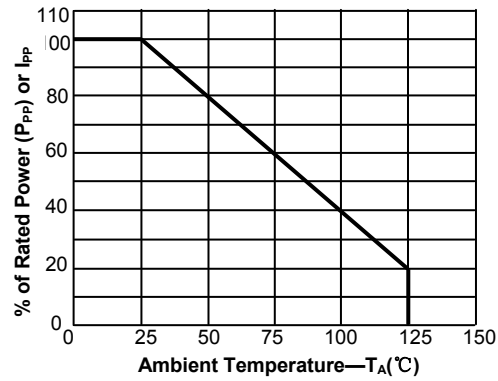


Fig.3 Pulse Waveform-8/20μs

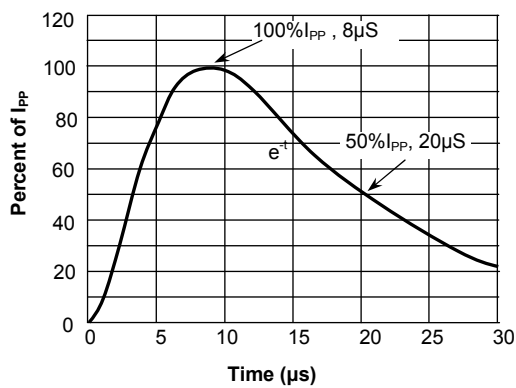


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

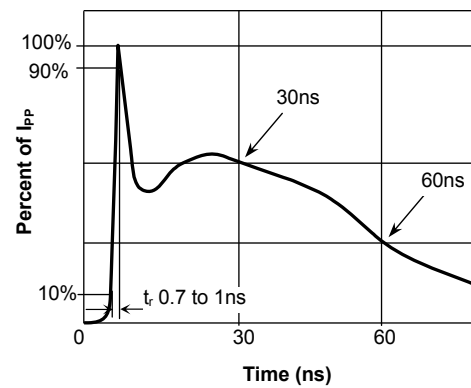


Figure5: Positive Clamping voltage (TLP)

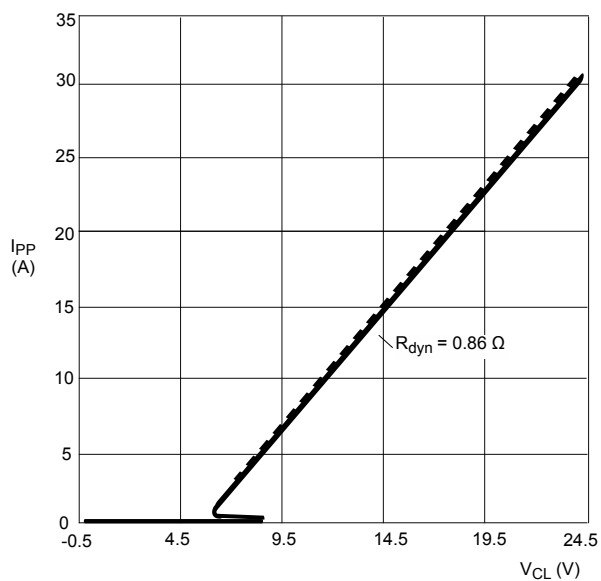


Figure5: Negative Clamping voltage (TLP)

