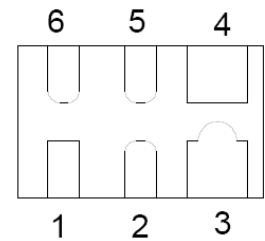
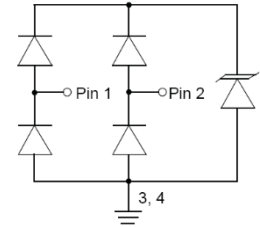


Features

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



DFN1610

Applications

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

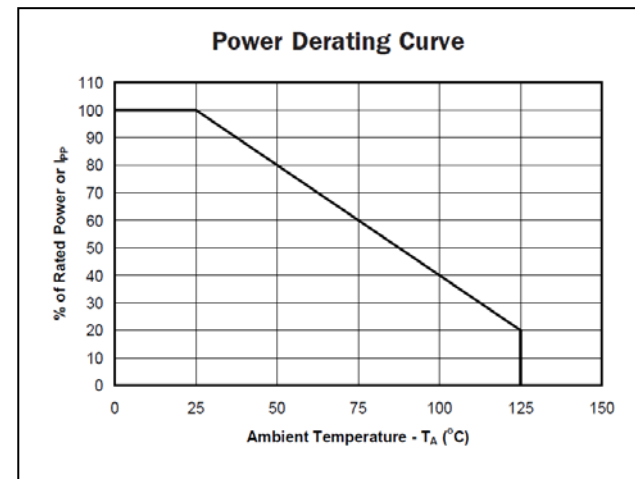
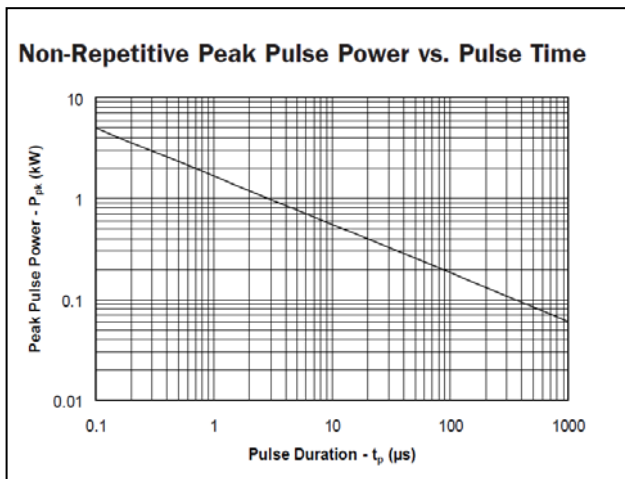
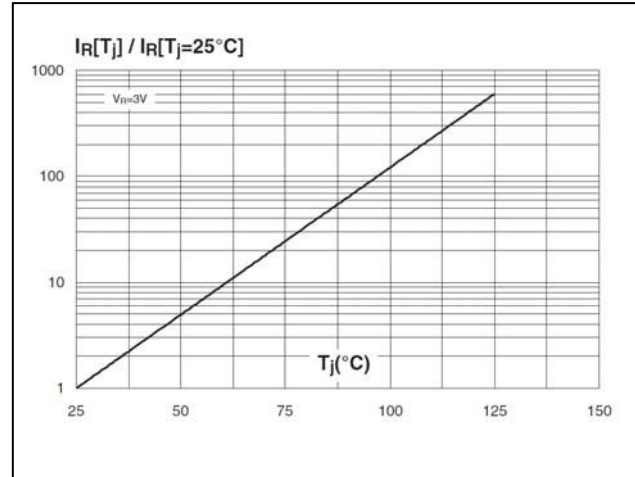
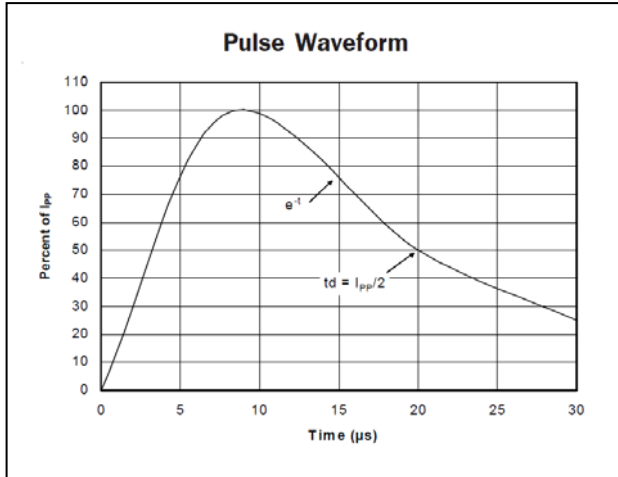
Maximum Rating @ $T_a = 25^\circ C$ unless otherwise specified

Symbol	Parameter	Ratings	Units
P_{PK}	Peak Pulse Power ($t_p = 8/20\mu s$)	150	Watts
T_L	Lead Soldering Temperature	260(10sec.)	$^\circ C$
T_J	Operating Temperature	-55 to +125	$^\circ C$
T_{STG}	Storage Temperature	-55 to +150	$^\circ C$

Electrical Characteristics@ Ta=25°C unless otherwise

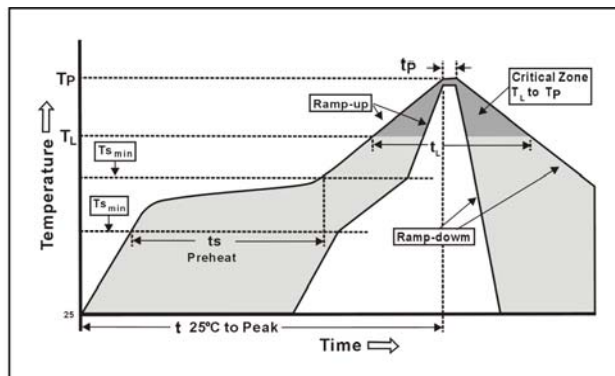
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V _{RWM}	Reverse Working Voltage	Any I/O to Ground			5.0	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA, Any I/O to Ground	6.0			V
I _R	Reverse Leakage Current	V _{RWM} = 5V, Any I/O to Ground			1	μA
V _F	Diode Forward Voltage	I _F = 15mA		0.85	1.2	V
V _C	Clamping Voltage	I _{PP} = 1A, t _p = 8/20μs, any I/O pin to Ground			9.8	V
		I _{PP} = 4A, t _p = 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	0.4	pF
		V _R = 0V, f = 1MHz, any I/O pin to Ground		0.6	0.8	pF

Typical Characteristics@ Ta=25°C unless otherwise specified



Soldering Parameters

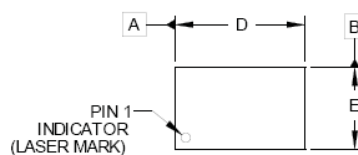
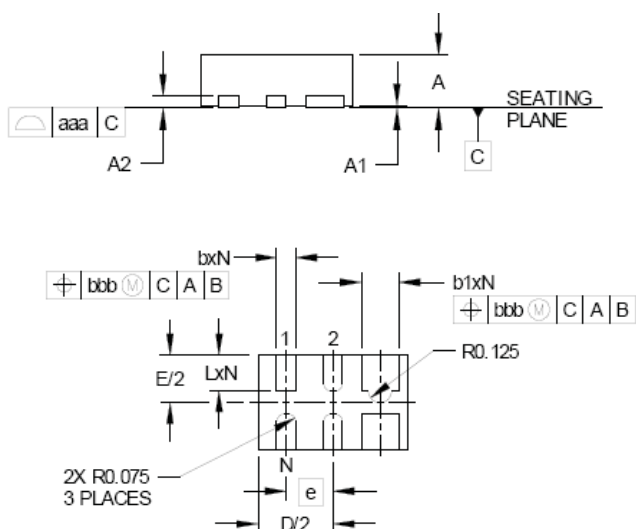
Reflow Condition		Fb – Free assembly
Pre Heat	-Temperature Min ($T_{s(Min)}$)	150°C
	-Temperature Max ($T_{s(Max)}$)	200°C
	-Time (Min to max) (t_p)	60 – 180 secs
Average ramp up rate (Liquidus) Temp (T_L) to peak		3°C/second Max
$T_{s(Max)}$ to T_L - Ramp-up Rate		3°C/second Max
Reflow	-Temperature (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-down Rate		6°C/second Max
Time 25°C to peak Temperature (T_p)		8 minutes Max.
Do not exceed		260°C



Package Outline

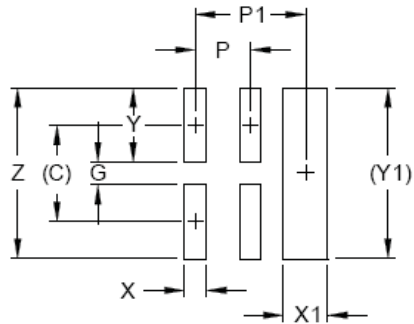
Plastic surface mounted package

DFN1610



DIM	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	.059	.063	.067	1.50	1.60	1.70
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		6			6	
aaa		.003			0.08	
bbb		.004			0.10	

Soldering Footprint



DIMENSIONS		
DIM	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

Package And Marking Information

Device	Package	Shipping	Reel Size
ZX0522P	DFN1610	3000/Reel	7 inch