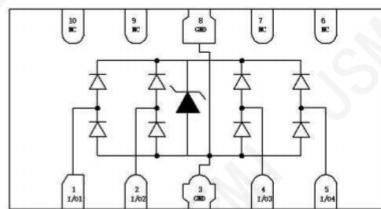


DESCRIPTION

The PUSB3AB4Z-JSM is an ultra low capacitance TVS diode, utilizing leading monolithic silicon technology to provide fast response time and low ESD clamping voltage, making this device an ideal solution for protecting voltage sensitive high-speed data of HDMI and USB ports.



FEATURES

- ◆ Ultra low capacitance (IO to IO typical value: 0.3pF)
- ◆ No insertion loss to 3.0GHz
- ◆ Working voltage: 3.3V
- ◆ Low clamping voltage
- ◆ Up to 4 lines protects
- ◆ RoHS Compliant

APPLICATIONS

- ◆ HDMI, USB and MDDI ports
- ◆ Set-top box and Digital TV
- ◆ Video graphics cards
- ◆ Digital Video Interface (DVI)
- ◆ PCI Express and Serial SATA Ports

MACHANICAL DATA

- ◆ Package: DFN2510
- ◆ Lead Finish: Matte Tin
- ◆ Case Material: "Green" Molding Compound
- ◆ UL Flammability Classification Rating 94V-0
- ◆ Moisture Sensitivity: Level 3 per J-STD-020

ORDERING INFORMATION

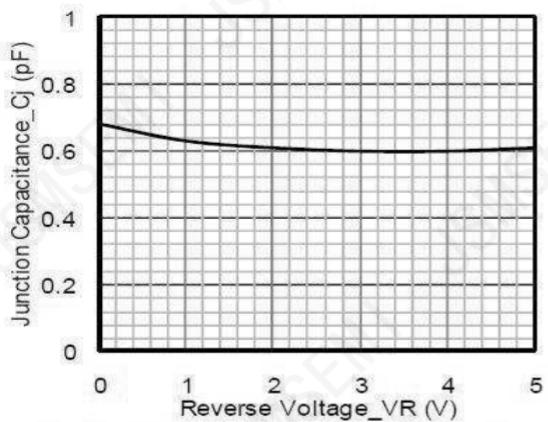
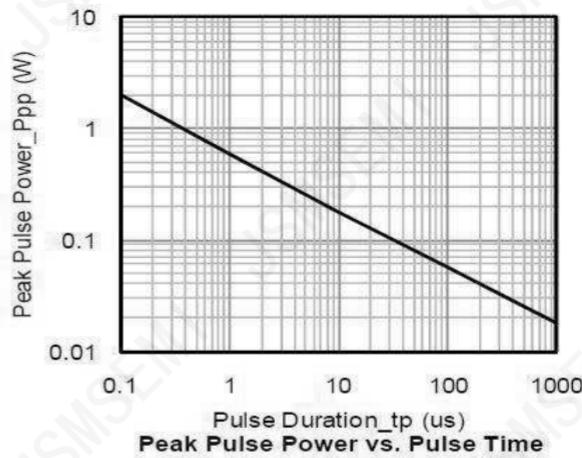
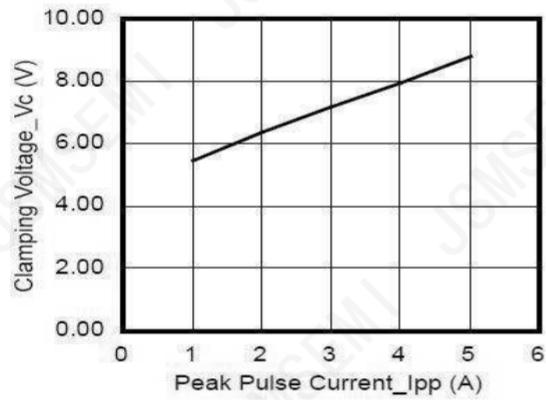
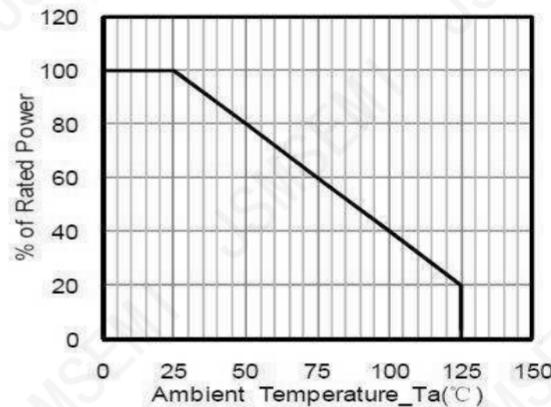
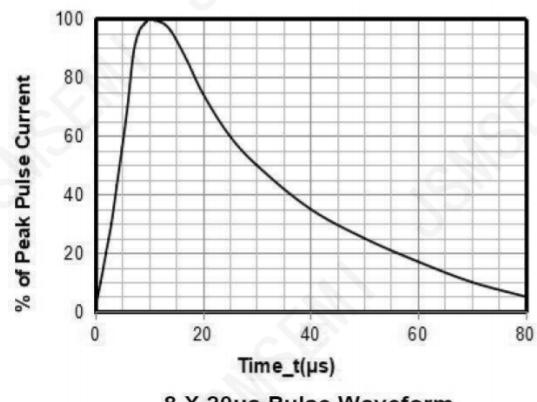
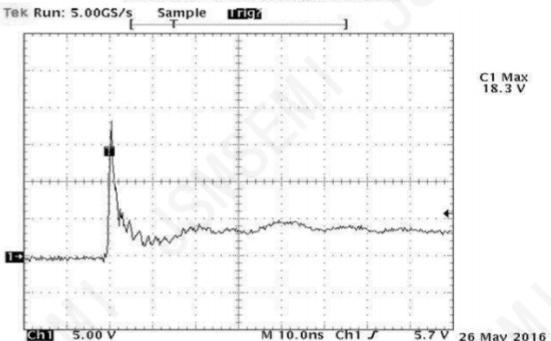
- ◆ Device: PUSB3AB4Z-JSM
- ◆ Package: DFN2510
- ◆ Material: Halogen free and RoHS compliant
- ◆ Packing: Tape & Reel
- ◆ Quantity per reel: 3,000/PCS

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P _{ppp}	50	W
Peak Pulse Current (8/20μs)	I _{pp}	5	A
ESD per EC 61000-4-2 (Air) ESD per EC 61000-4-2 (Contact)	V _{ESD}	±15 ±8	kV
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

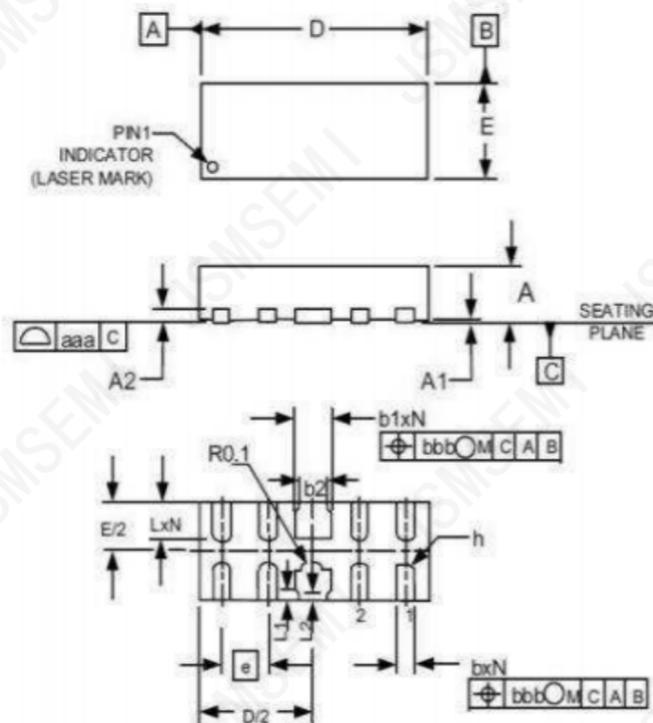
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			3.3	V	
Punch-Through Voltage	V_{PT}	3.5			V	$T = 2\mu\text{A}$, any I/O pin to ground
Snap-Back Voltage	V_{SB}	2.8			V	$T = 50\text{mA}$, any I/O pin to ground
Reverse Leakage Current	I_R			0.5	μA	$V_{RWM} = 3.3\text{V}$, any I/O pin to ground
Clamping Voltage	V_C			6.5	V	$PP = 1\text{A}$ ($8 \times 20\mu\text{s}$ pulse), any I/O pin to ground
Clamping Voltage	V_C			10	V	$PP = 5\text{A}$ ($8 \times 20\mu\text{s}$ pulse), any I/O pin to ground
Junction Capacitance	C_J		0.3	0.4	pF	$VR = 0\text{V}$, $f = 1\text{MHz}$, between I/O pins
Junction Capacitance	C_J			0.8	pF	$VR = 0\text{V}$, $f = 1\text{MHz}$, any I/O pin to ground

Typical Performance Characteristics (TA=25°C unless otherwise Specified)

Junction Capacitance vs. Reverse Voltage

Peak Pulse Power vs. Pulse Time

Clamping Voltage vs. Peak Pulse Current

Power Derating Curve

8 X 20 μ s Pulse Waveform


Note: Data is taken with a 10x attenuator

Contact discharge current waveform

per IEC61000-4-2

Package Mechanical Data


SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	.017	.020	.022
A1	0.000	0.001	0.002	0.00	0.02	0.05
A2	(0.15)			(.006)		
b	0.10	0.20	0.25	.006	.008	.010
b1	0.35	0.40	0.45	.014	.016	.018
b2	0.20	0.25	0.45	.005	.010	.018
D	2.45	2.50	2.55	.096	.098	.100
E	0.95	1.00	1.05	.037	.039	.041
e	0.50 BSC			.020 BSC		
L	0.35	0.40	0.45	.014	.016	.018
L1	0.00	0.075	0.10	.000	.003	.004
L2	0.00	0.05	0.05	.000	.002	.003
h	0.00	0.12	0.15	.000	.005	.006
h	0.07	0.12	0.17	0.003	0.005	0.007
N	8			8		
aaa	0.08			0.003		
Bbb	0.10			0.004		

Revision History

Rev.	Change	Date
V1.0	Initial version	6/27/2021

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