

# ME3V3U1BAAS

## 1. Features

- 28Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Solid-state silicon-avalanche technology
- Capacitance: 0.35pF TYP.
- Low clamping voltage
- Low leakage current
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test Air discharge:  $\pm 18KV$  Contact discharge:  $\pm 16KV$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5(Lightning) 7A (8/20us)

## 2. Application

- USB3.0/3.1/ Type-C
- Thunderbolt interface
- DisplayPort interface
- Handheld portable application

## 3. Mechanical Data

- Package: DFN0603
- UL Flammability Classification Rating 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

## 4. Absolute Maximum Rating

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air)	$V_{ESD}$	$\pm 16$ $\pm 18$	KV
Peak Pulse Power(8/20 $\mu s$ )	$P_{PP}$	28	W
Reverse Working Voltage	$V_{RWM}$	3.3	V
Peak Pulse Current	$I_{PP}$	7	A
Operating Temperature	$T_{OPT}$	-55~+125	°C
Storage Temperature	$T_{stg}$	-55~+150	°C

## 5. Pinning information

Pin	Polarity	Simplified outline	Equivalent Circuit	Marking	Package
2	Bi			9S	DFN0603

## 6. Electrical Characteristics (T<sub>amb</sub>=25°C)

Parameter	Symbols	Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V <sub>RWM</sub>				3.3	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> =0.1mA	5.0			V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> =1.5V			0.1	μA
Reverse Holding Current	V <sub>Hold</sub>	I <sub>Hold</sub> =10mA		1.4		V
Clamping Voltage	V <sub>C</sub>	I <sub>pp</sub> =1A, t <sub>p</sub> =8/20us		1.8		V
Clamping Voltage	V <sub>C</sub>	I <sub>pp</sub> =7A, TP=8/20us		4.0		V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> =0V, f=1MHz		0.35		pF

## 7. Electrical Parameters

Symbol	Parameter
I <sub>PP</sub>	Maximum Reverse Peak Pulse Current
V <sub>C</sub>	Clamping Voltage@I <sub>PP</sub>
V <sub>RWM</sub>	Reverse Working Voltage
I <sub>R</sub>	Maximum Reverse Leakage Current
I <sub>BR</sub>	Test Current
V <sub>BR</sub>	Breakdown Voltage@I <sub>T</sub>
V <sub>SB</sub>	Snapback Voltage
I <sub>SB</sub>	Snapback Test Current
V <sub>TRIG</sub>	Reverse Trigger Voltage
I <sub>TRIG</sub>	Reverse Trigger Current
V <sub>HOLD</sub>	Reverse Holding Voltage
I <sub>HOLD</sub>	Reverse Holding Current

V<sub>RWM</sub> Reverse stand-off Voltage  
 I<sub>R</sub> Reverse leakage current  
 V<sub>CL</sub> Clamping voltage  
 I<sub>PP</sub> Peak pulse current

V<sub>TRIG</sub> Reverse trigger voltage  
 I<sub>TRIG</sub> Reverse trigger current  
 V<sub>BR</sub> Reverse breakdown voltage  
 I<sub>BR</sub> Reverse breakdown current  
 V<sub>HOLD</sub> Reverse holding voltage  
 I<sub>HOLD</sub> Reverse holding current

## 8. Typical Characteristics

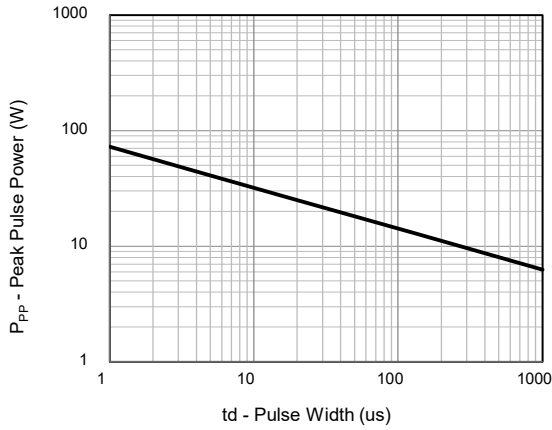


Figure 1. Peak Pulse Power Rating

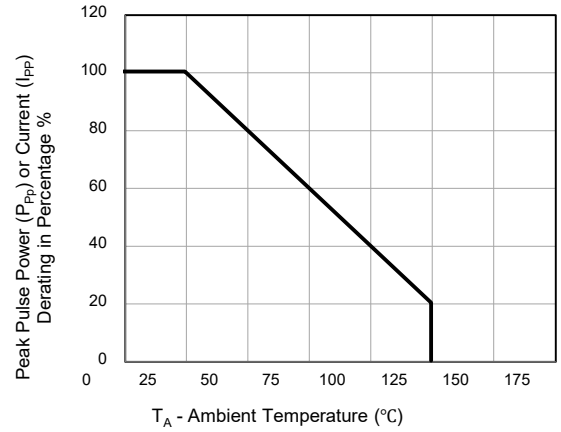


Figure 2. Pulse Derating Curve

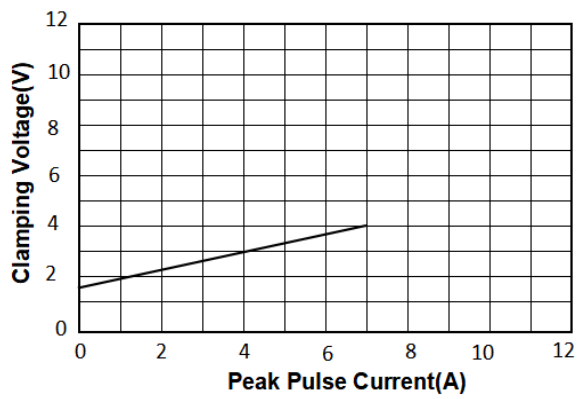


Figure 3. Typical Clamping Voltage

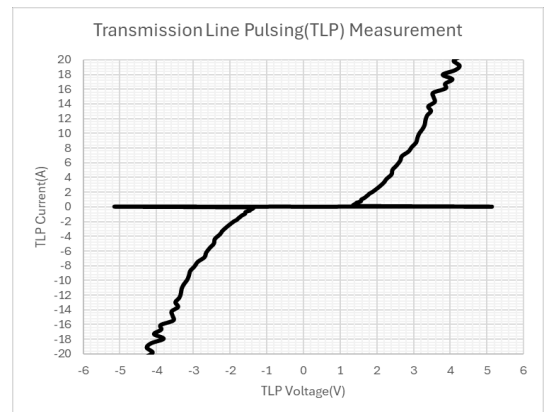
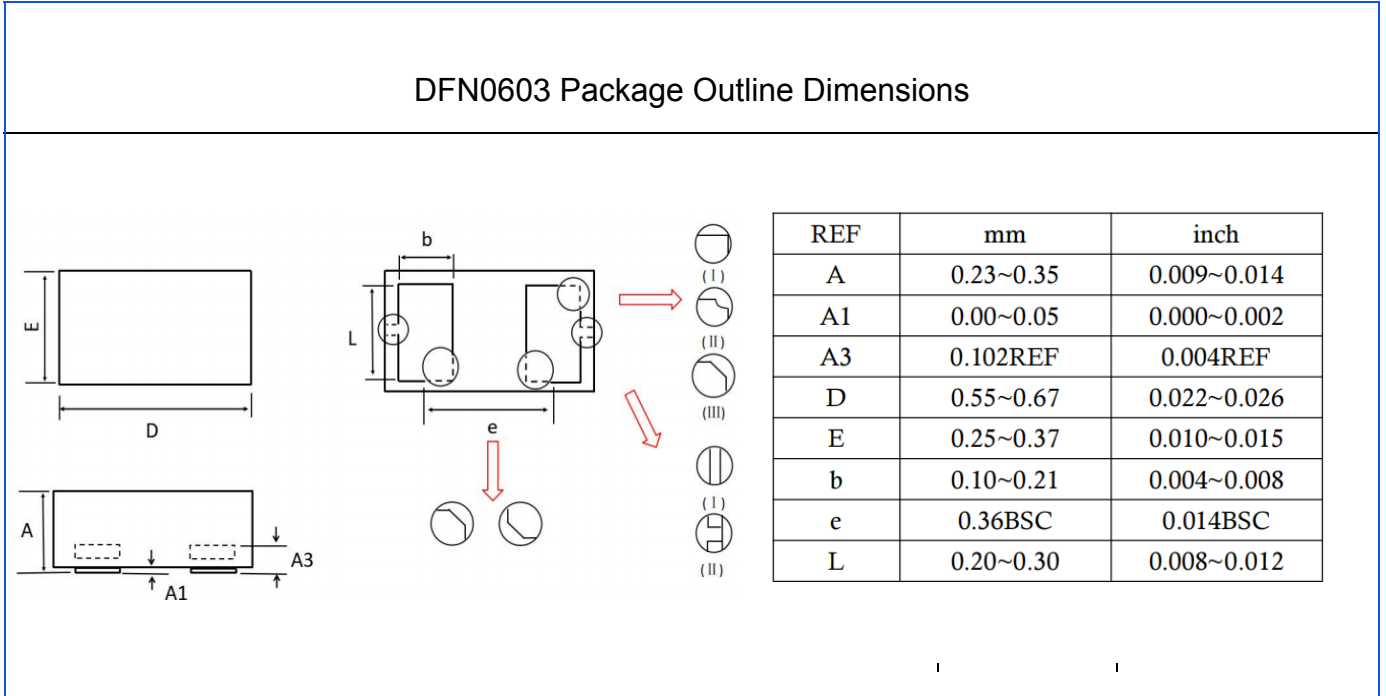


Figure 3. TLP ( 1/100ns )

## 9. Outline Drawing



## 10. Reel packing

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (pcs)	QTY/Box (pcs)	Q'TY/Carton (pcs)
DFN0603	7'	178	10,000	100,000	400,000

## 11. Important Notice and Disclaimer

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