

ME5V0U1BAAS

1. Features

- 28Watts peak pulse power ($t_p = 8/20\mu s$)
- Solid-state silicon-avalanche technology
- Capacitance: 0.3pF TYP.
- Low clamping voltage
- Low leakage current
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test Air discharge: $\pm 20KV$ Contact discharge: $\pm 15KV$
 - 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}	± 15 ± 20	KV
Peak Pulse Power(8/20 μs)	P_{PP}	28	W
Reverse Working Voltage	V_{RWM}	5.0	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			2S	DFN0603

6. Electrical Characteristics (Tamb=25°C)

Parameter	Symbols	Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=0.1mA$	6.0			V
Reverse Leakage Current	I_R	$V_{RWM}=5.0V$			0.1	μA
Reverse Holding Current	V_{Hold}	$I_{Hold}=10mA$		1.4		V
Clamping Voltage	V_C	$I_{pp}=1A, t_p=8/20\mu s$		1.8		V
Clamping Voltage	V_C	$I_{pp}=7A, TP=8/20\mu s$		3.0	4.0	V
Junction Capacitance	C_J	$V_R=2.5V, f=1MHz$		0.3		pF

7. Electrical Parameters

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage@ I_{PP}
V_{RWM}	Reverse Working Voltage
I_R	Maximum Reverse Leakage Current
I_{BR}	Test Current
V_{BR}	Breakdown Voltage@ I_T
V_{SB}	Snapback Voltage
I_{SB}	Snapback Test Current
V_{TRIG}	Reverse Trigger Voltage
I_{TRIG}	Reverse Trigger Current
V_{HOLD}	Reverse Holding Voltage
I_{HOLD}	Reverse Holding Current

V_{RWM} Reverse stand-off Voltage
 I_R Reverse leakage current
 V_{CL} Clamping voltage
 I_{PP} Peak pulse current

V_{TRIG} Reverse trigger voltage
 I_{TRIG} Reverse trigger current
 V_{BR} Reverse breakdown voltage
 I_{BR} Reverse breakdown current
 V_{HOLD} Reverse holding voltage
 I_{HOLD} Reverse holding current

8. Typical Characteristics

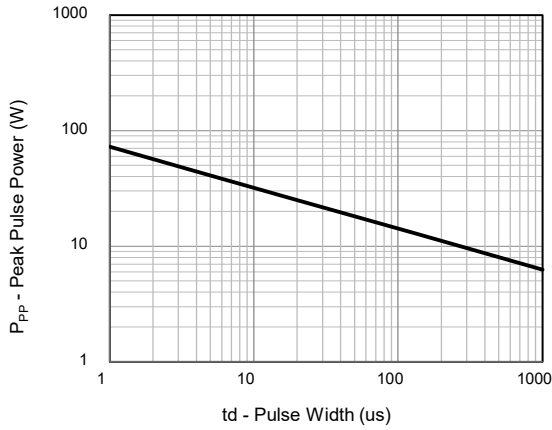


Figure 1. Peak Pulse Power Rating

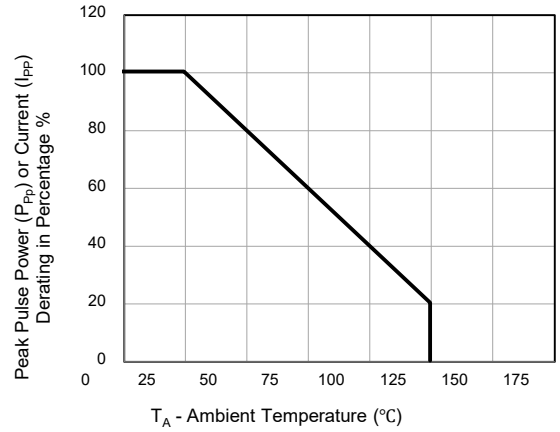


Figure 2. Pulse Derating Curve

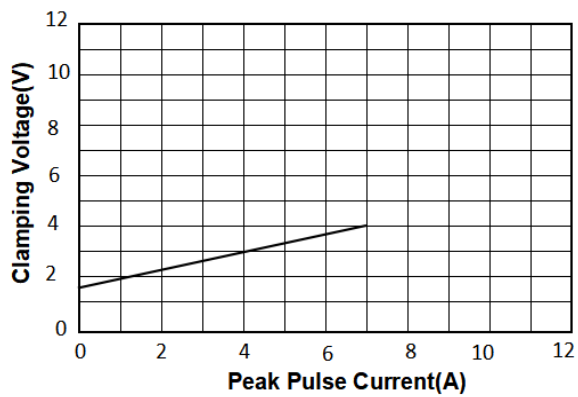


Figure 3. Typical Clamping Voltage

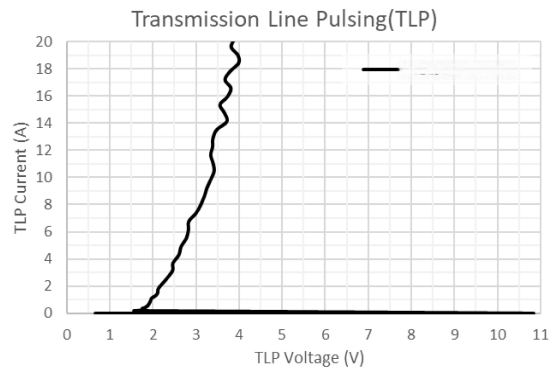
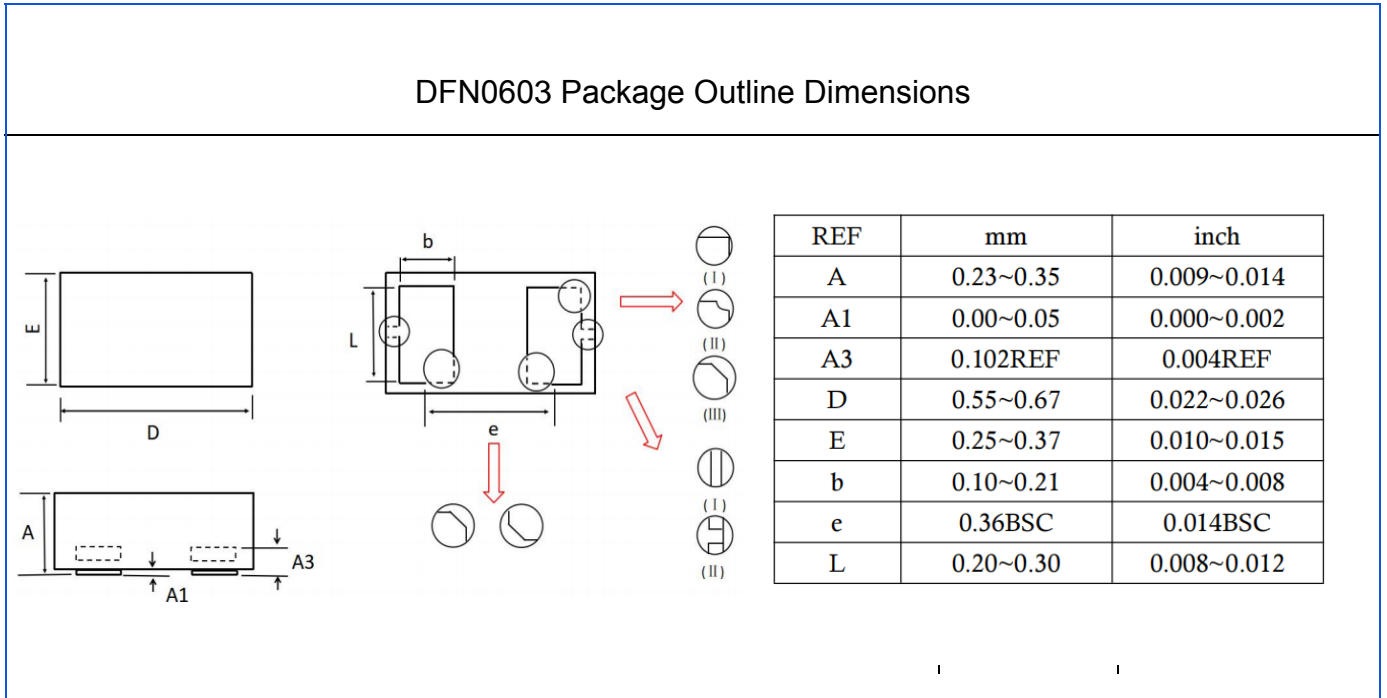


Figure 4. TLP(1/100ns)

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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