

ME12VZ1UAD

1. Protection Solution To Meet

- IEC61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- IEC61000-4-4 (EFT) 80A (5/50ns)
- IEC61000-4-5 (Lightning) 80A (8/20 μs)

2. Features

- Protects one Uni-directional Vbus
- Low clamping voltage
- Working voltage: 12V
- Low leakage current
- RoHS compliant

3. Main Application

- Cell phone handsets and accessories
- Microprocessor based equipment
- Personal digital assistants (PDA' s)
- Notebooks, desktops, and servers
- Portable instrumentation

4. Mechanical Characteristics

- DFN1610-2L package
- Molding compound flammability rating: UL 94V-0
- Weight 6 milligrams (approximate)
- Lead finish: lead free
- Marking code: Z12U

5. Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Contact)	$V_{\text{ESD-Contact}}$	± 30	KV
ESD per IEC 61000-4-2 (Air)	$V_{\text{ESD-Air}}$	± 30	KV
Peak Pulse Power (8/20us)	P_{pp}	2080	W
Peak Pulse Current (8/20us)	I_{pp}	80	A
Operating Temperature	T_{OPT}	-55~+150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~+150	$^\circ\text{C}$

6. Pinning information

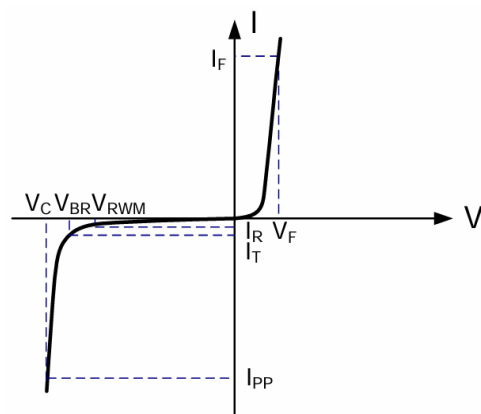
Simplified outline	Equivalent Circuit	Marking	Package
			DFN1610-2L

7. Electrical Characteristics (Tamb = 25°C)

Parameter	Symbols	Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				12	V
Breakdown Voltage	V_{BR}	$I_T = 1mA$	13.3			V
Reverse Leakage Current	I_R	$V_{RWM} = 12V$			1	μA
Clamping Voltage	V_C	$I_{pp} = 80A, t_p = 8/20\mu s$		23	26	V
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$		350		pF

8. Electrical Parameters

Symbol	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}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T
V_F	Forward Voltage
I_F	Forward Test Current



9. Typical Characteristics

Fig.1 8/20us Waveform Per IEC6100-4-5

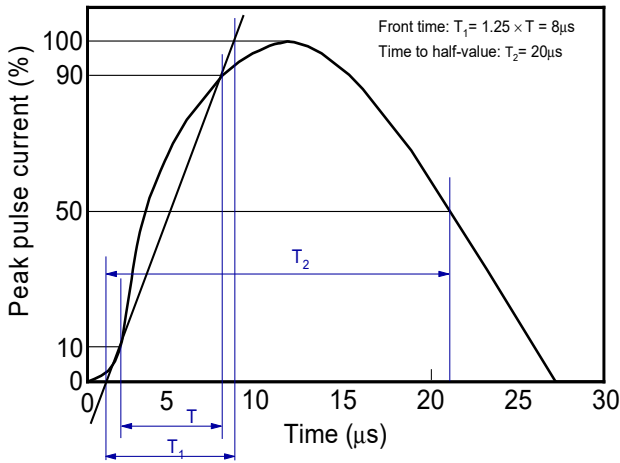


Fig.2 Contact Discharge Current Waveform per IEC61000-4-2

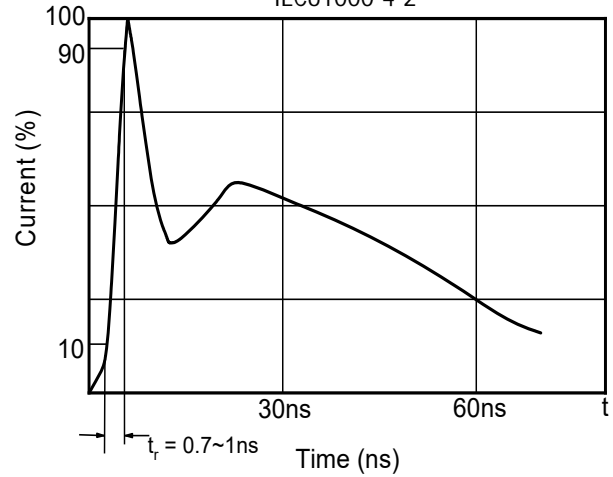


Fig.3 Clamping Voltage Vs. Peak Pulse Current

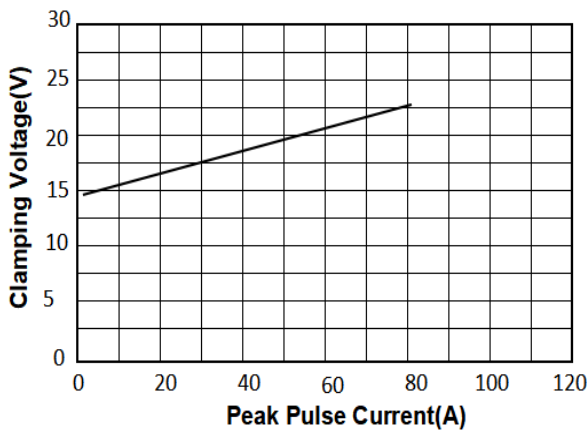
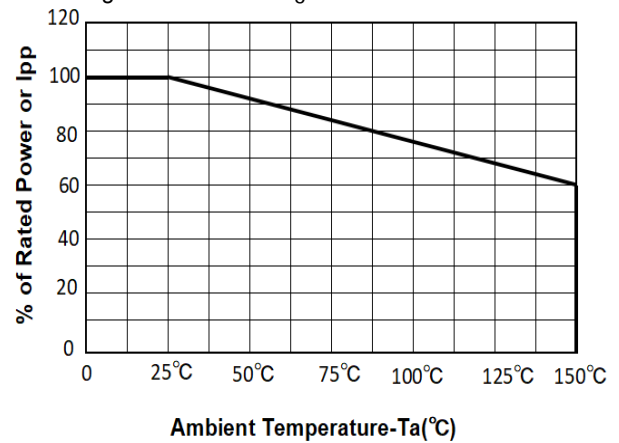
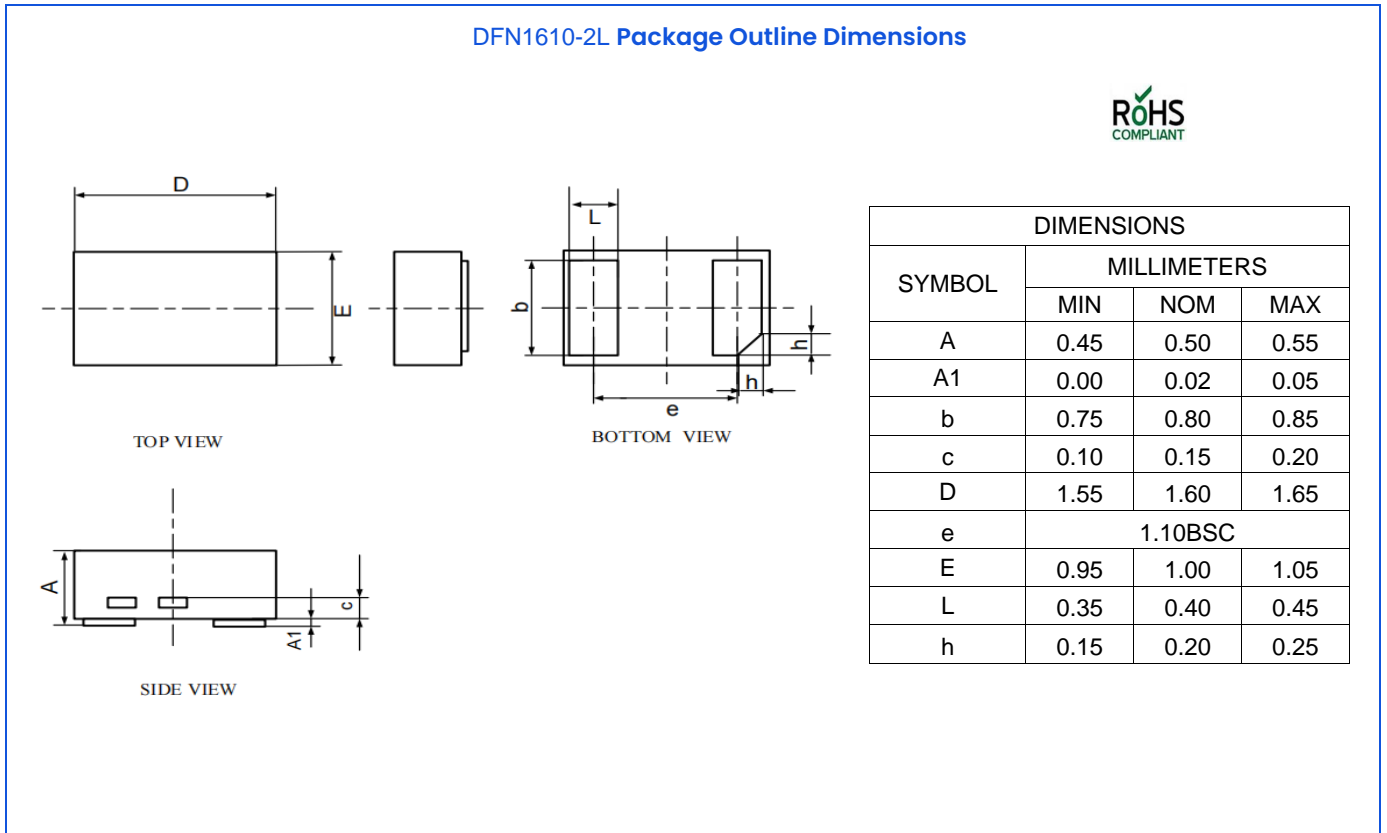


Fig.4 Power Derating

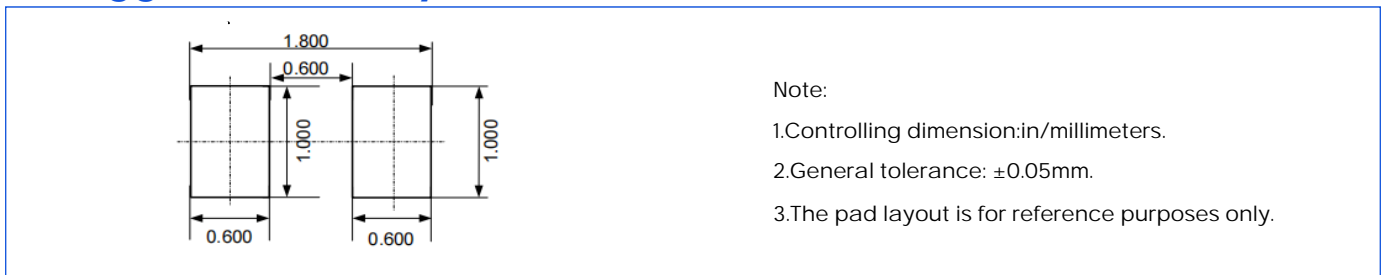


The curve above is for reference only.

10. Outline Drawing



11. Suggested Pad Layout



12. PACKAGE SPECIFICATIONS

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (pcs)	QTY/Box (pcs)	Q'TY/Carton (pcs)
DFN1610-2L	7'	178	10000	150,000	600,000

13.Important Notice and Disclaimer

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