

DFN1006-2L Plastic-Encapsulate ESD Protection Diodes

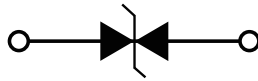
Features

- Low leakage current
- Low clamping voltage
- IEC 61000-4-2 (ESD Air): $\pm 30\text{kV}$
- IEC 61000-4-2 (ESD Contact): $\pm 30\text{kV}$
- IEC 61000-4-5 (Lightning 8/20 μs): 55A

Applications

- Cellular Handsets and Accessories
- Notebooks and Handhelds
- Audio Players, Peripherals
- Personal Digital Assistants
- Portable Instrumentation
- Keypads, Side Keys, LCD Displays

Function Diagram



Reverse Working Voltage
4.5V Max.
High capacitance
150pF(Max.)

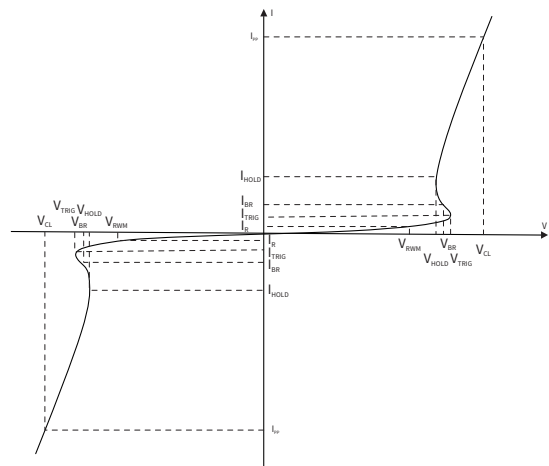


Maximum Ratings (Ta=25°C Unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{ESD}	Electrostatic Discharge Voltage	ESD per IEC 61000-4-2(Air)	± 30	KV
		ESD per IEC 61000-4-2(Contact)	± 30	KV
P _{PP}	Peak Pulse Power	tp = 8/20 μs	825	W
I _{PP}	Rated Peak Pulse Current	tp = 8/20 μs	55	A
T _J	Operating JunctionTemperature Range	—	-55 to +125	°C
T _{STG}	Operating JunctionTemperature Range	—	-55 to +125	°C

Electrical Parameter

SYMBOL	PARAMETER
V _{CL}	Clamping Voltage @ I _{PP}
I _R	Reverse leakage current
I _{PP}	Peak Pulse Current
V _{TRIG}	Reverse trigger voltage
I _{TRIG}	Reverse trigger current
V _{RWM}	Peak Reverse Working Voltage
P _{PP}	Peak Pulse Power Dissipation
V _{BR}	Reverse breakdown voltage
I _{BR}	Reverse breakdown current
V _{HOLD}	Reverse holding voltage
I _{HOLD}	Reverse holding current



Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	CONDITION	Min	Typ	Max	UNIT
Peak Reverse Working Voltage	V_{RWM}	$T_a=25^\circ\text{C}$	—	—	4.5	V
Breakdown Voltage	V_{BR}	$I_R=1.0\text{mA}, T_a=25^\circ\text{C}$	4.5	5.5	8.5	V
Reverse Leakage Current	I_R	$V_{RWM}=4.5\text{V}, T_a=25^\circ\text{C}$	—	—	0.1	μA
Hold Voltage of Snapback(1)	V_{HOLD}	Anode to GND	4.5	—	—	V
		GND to Anode	3.3	—	—	
Clamping Voltage	V_C	$I_{PP}=55\text{A}, t_p=8/20\mu\text{s}$	—	11	15	
Junction Capacitance	C_J	$V_{RWM}=0\text{V}, f=1\text{MHz}$	—	100	150	pF

Note :

1. There specifications are guaranteed by design and characterization.

Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

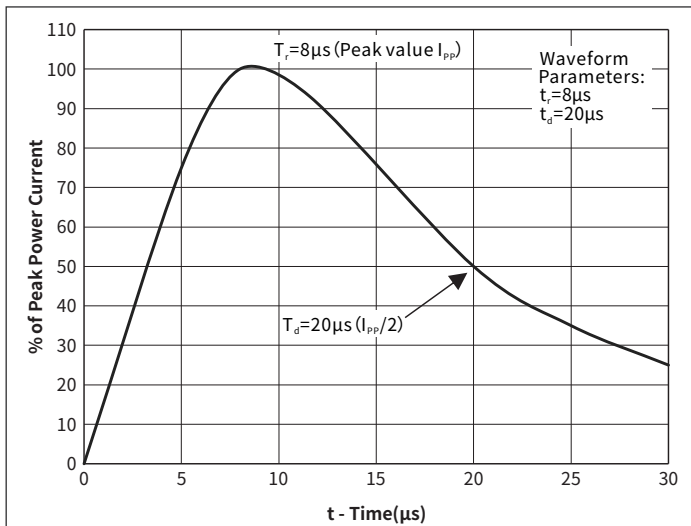


Fig.1 Pulse Waveform

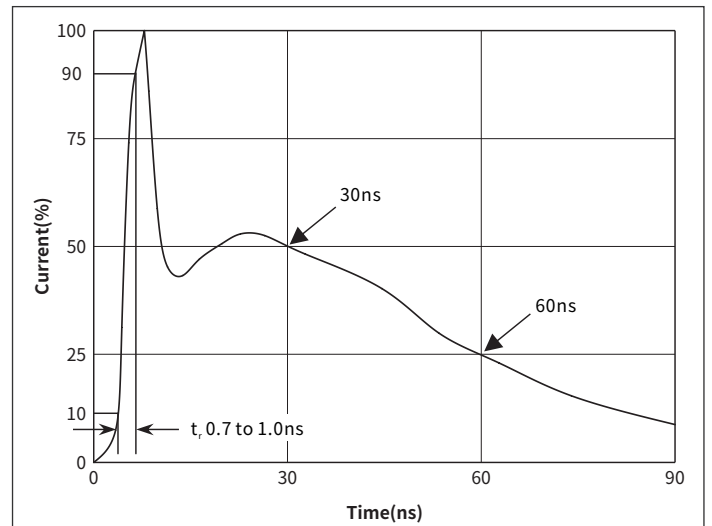


Fig.2 Pulse Waveform-ESD(IEC61000-4-2)

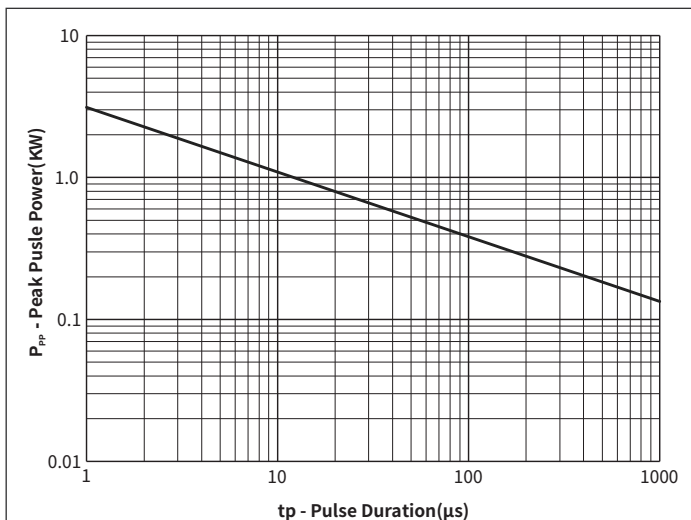


Fig.3 Peak Pulse Power vs. Pulse Time

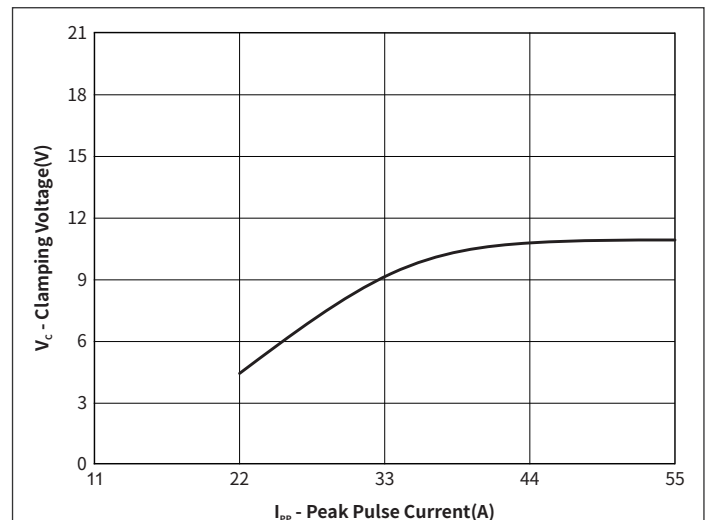
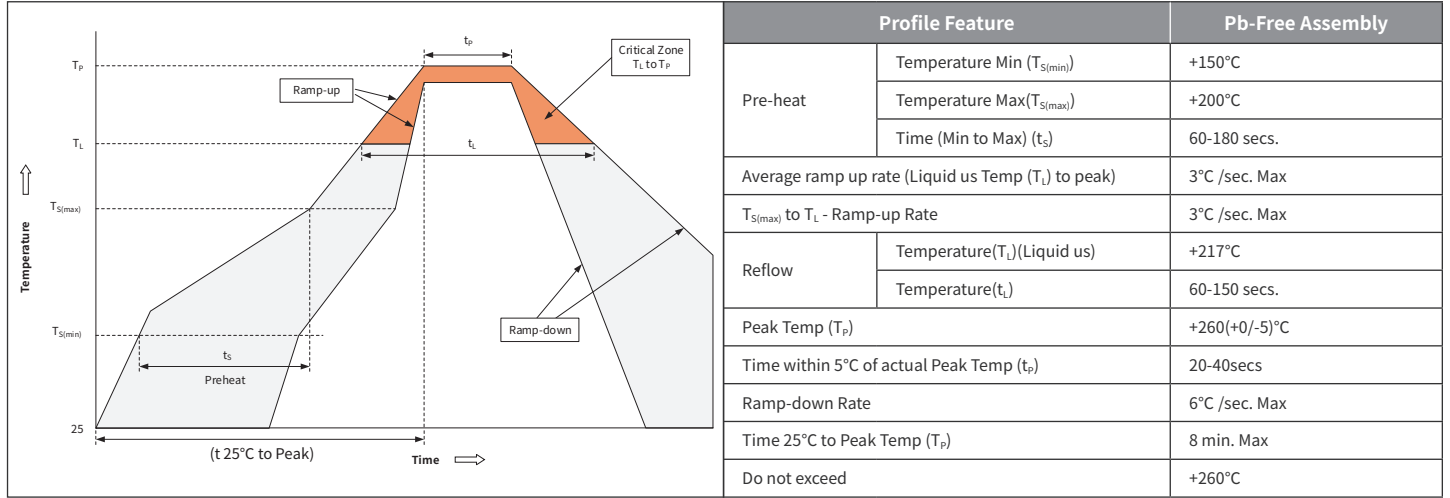


Fig.4 Clamping Voltage vs. Peak Pulse Current

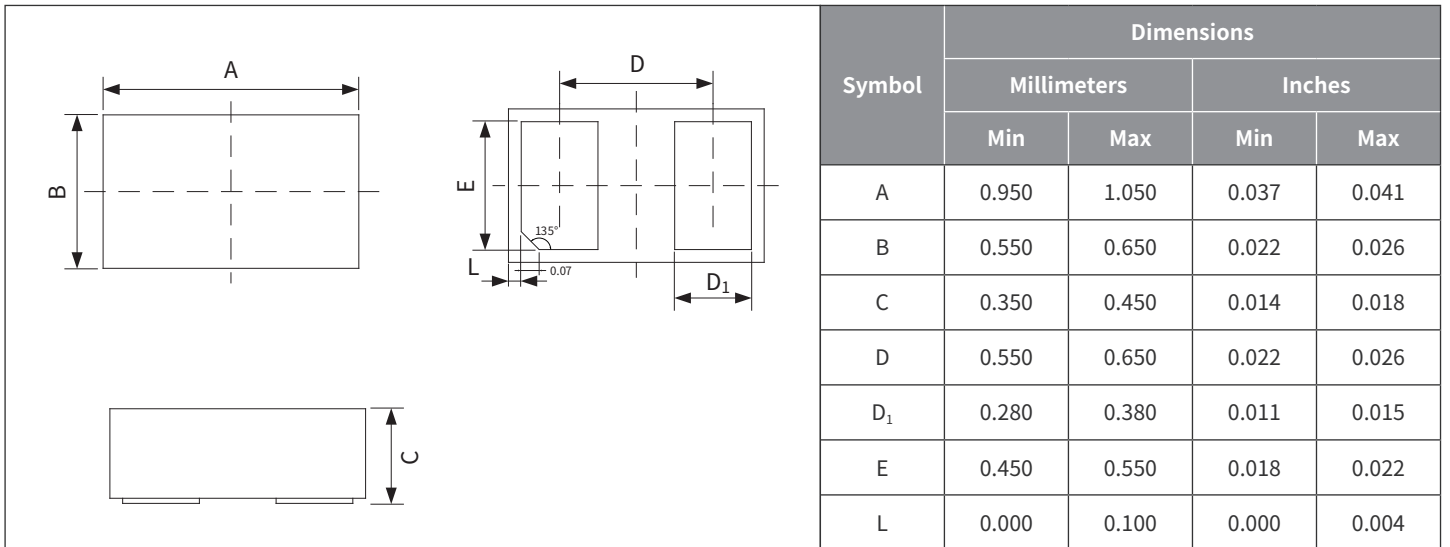
Ordering Information

PREFERED P/N	PACKAGE	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
H4S5N10B	DFN1006-2L	1.00×0.60×0.37	7" REEL	10,000

Recommended Soldering Conditions



Package Outline Dimensions (DFN1006)



Suggested Pad Layout

