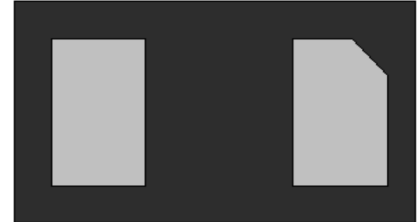


Features

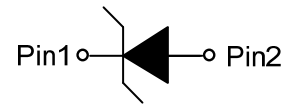
- Ultra small package
- Stand-off voltage: 48V Max
- Ultra-low capacitance: $C_J = 20\text{pF typ}$
- Low leakage current
- Low clamping voltage
- Compliant to Halogen-free

Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Peripherals
- Pagers Peripherals
- Desktop and Servers



0402(DFN-2L)



PIN Configuration

Protection Solution to Meet

- IEC 61000-4-2 (ESD Air): +30KV
- IEC 61000-4-2 (ESD Contact): +30KV
- IEC 61000-4-5 (Surge): 4A(8/20 μ s)

Mechanical Data

- DFN-2L package
- Marking code : 48

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

Symbol	Parameter	Conditions	Rating	Unit
V_{ESD}	Electrostatic Discharge Voltage	IEC 61000-4-2; Contact Discharge	± 30	kV
		IEC 61000-4-2; Air Discharge	± 30	kV
P_{PK}	Peak Pulse Power	$t_P = 8/20 \mu\text{s}$	380	W
I_{PP}	Peak Pulse Current	$t_P = 8/20 \mu\text{s}$	4	A
T_J	Junction Temperature Range	-	125	$^\circ\text{C}$
T_{STG}	Storage Temperature Range	-	-55~150	$^\circ\text{C}$

Electrical Characteristics (T_A=25°C unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V _{RWM}	Reverse Working Voltage		-	-	48	V
V _{BR}	Breakdown Voltage	I _{BR} = 1mA	50		61	V
I _R	Reverse Leakage Current	V _{RWM} = 48V	-	-	0.5	μA
V _C	Clamping Voltage ³⁾	I _{PP} =1A, t _p = 8/20μs	-		75	V
		I _{PP} =4A, t _p = 8/20μs	-		95	V
C _J	Junction Capacitance	V _R = 0V, f = 1 MHz	-	20	25	pF

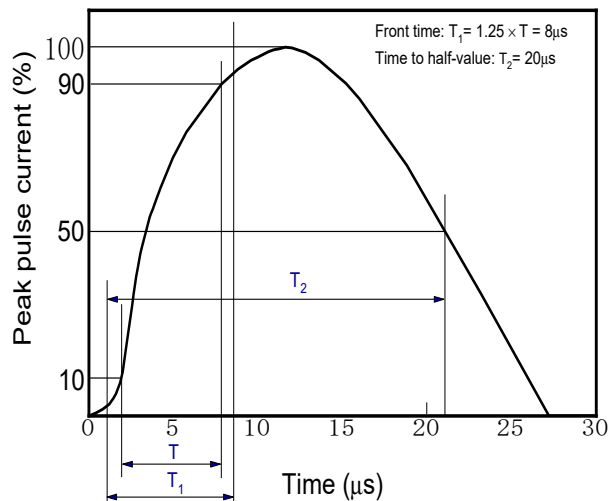
1) TLP parameter: Z₀ = 50Ω, T_F = 100ns, T_R = 2ns, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.

2) Contact discharge mode, according to IEC61000-4-2.

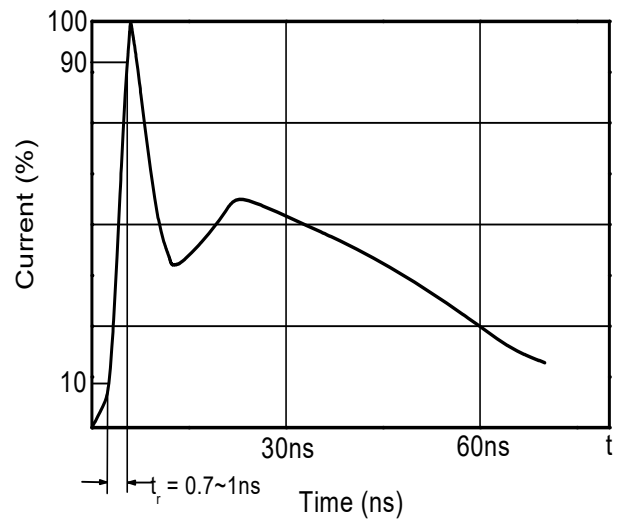
3) Non-repetitive current pulse, according to IEC61000-4-5.

Typical Characteristics (T_A=25°C unless otherwise noted)

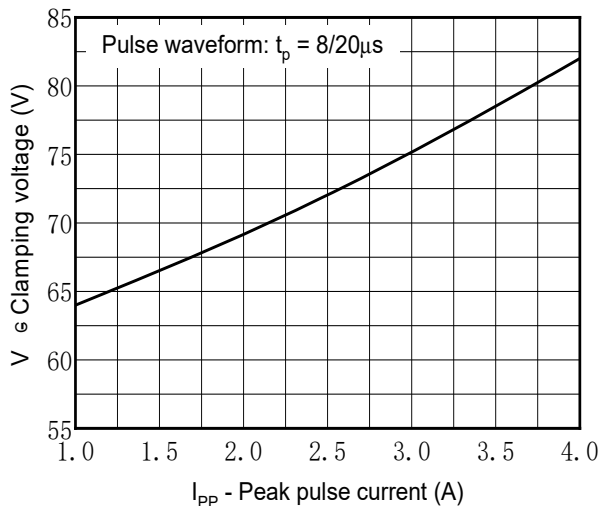
8/20μs waveform per IEC61000-4-5



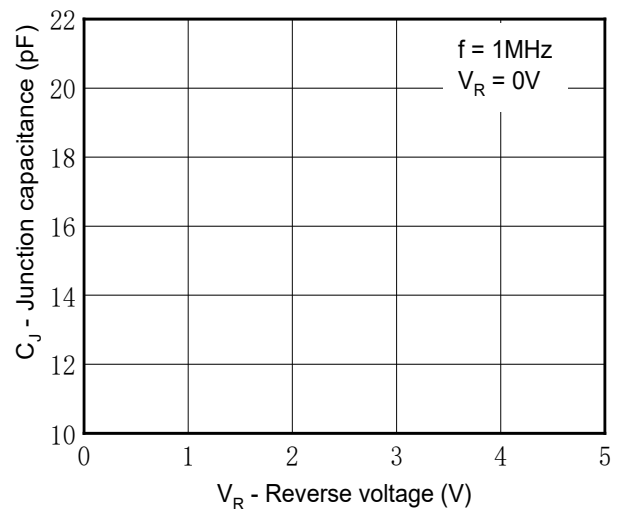
Contact discharge current waveform per IEC61000-4-2



Clamping voltage vs. Peak pulse current

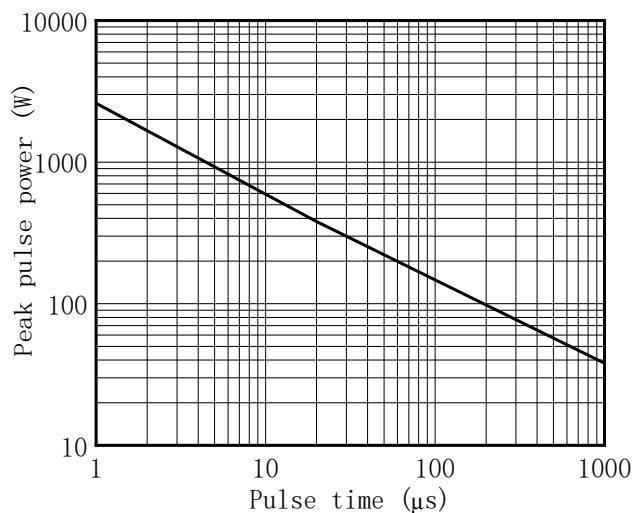


Capacitance vs. Reverse voltage

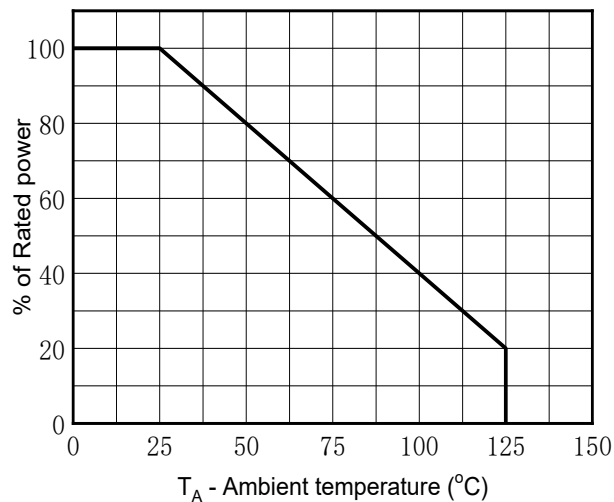


Typical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

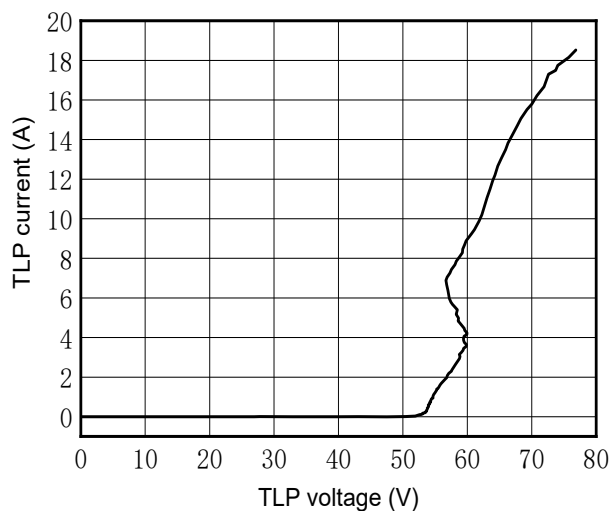
Non-repetitive peak pulse power vs. Pulse time



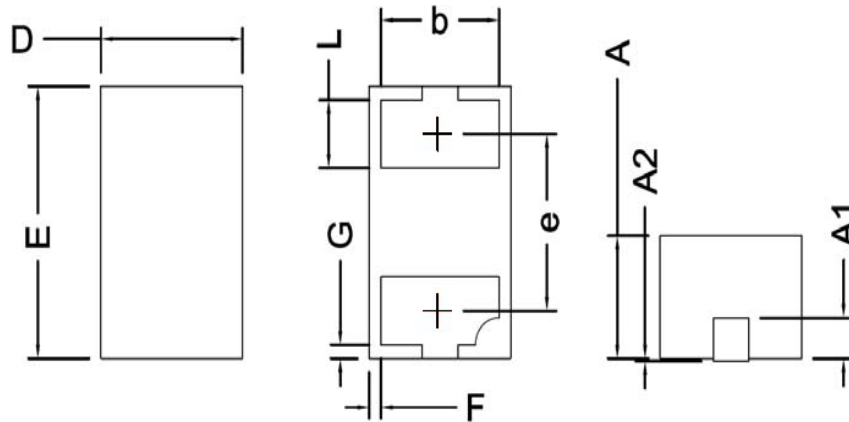
Power derating vs. Ambient temperature



TLP Measurement

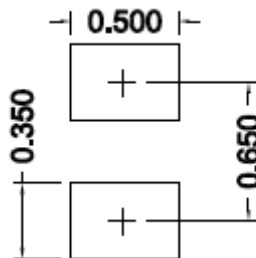


DFN-2L Outline Dimensions



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
D	0.50	0.60	0.70
E	0.90	1.00	1.10
A	0.35	0.45	0.55
A1	0.15 BSC		
A2			0.10
F	0.005		
G	0.005		
L	0.15	0.25	0.35
b	0.41	0.50	0.59
e	0.65 BSC		

Recommended PCB Layout



Unit:mm

Notes:

This recommended land pattern is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met