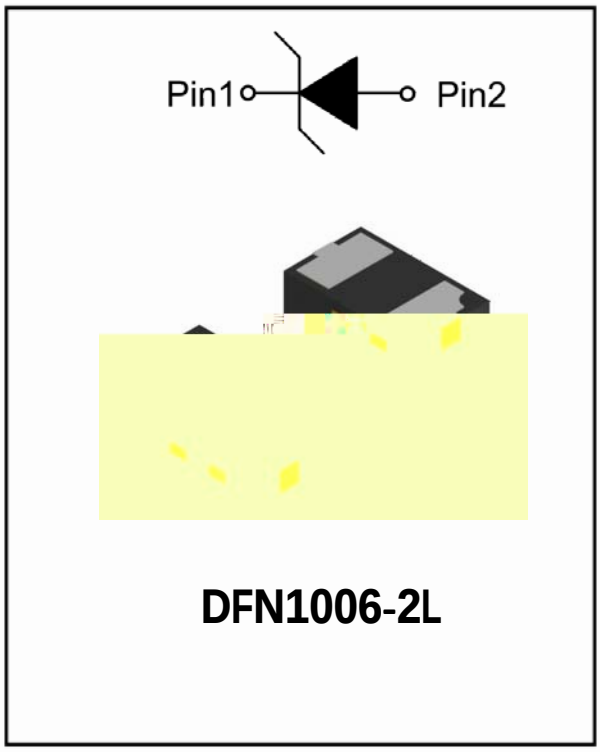
1-Line, Uni-directional, Transient Voltage Suppressor



Features

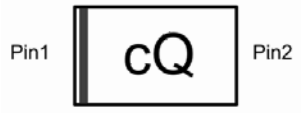
- Ultra small package
- Stand-off voltage: 12V Max
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±30kV (contact)
  IEC61000-4-4 (EFT): 80A (5/50ns)
  IEC61000-4-5(surge): 25A (8/20μs)
- Low leakage current
- Low clamping voltage
- RoHS Compliant

Applications

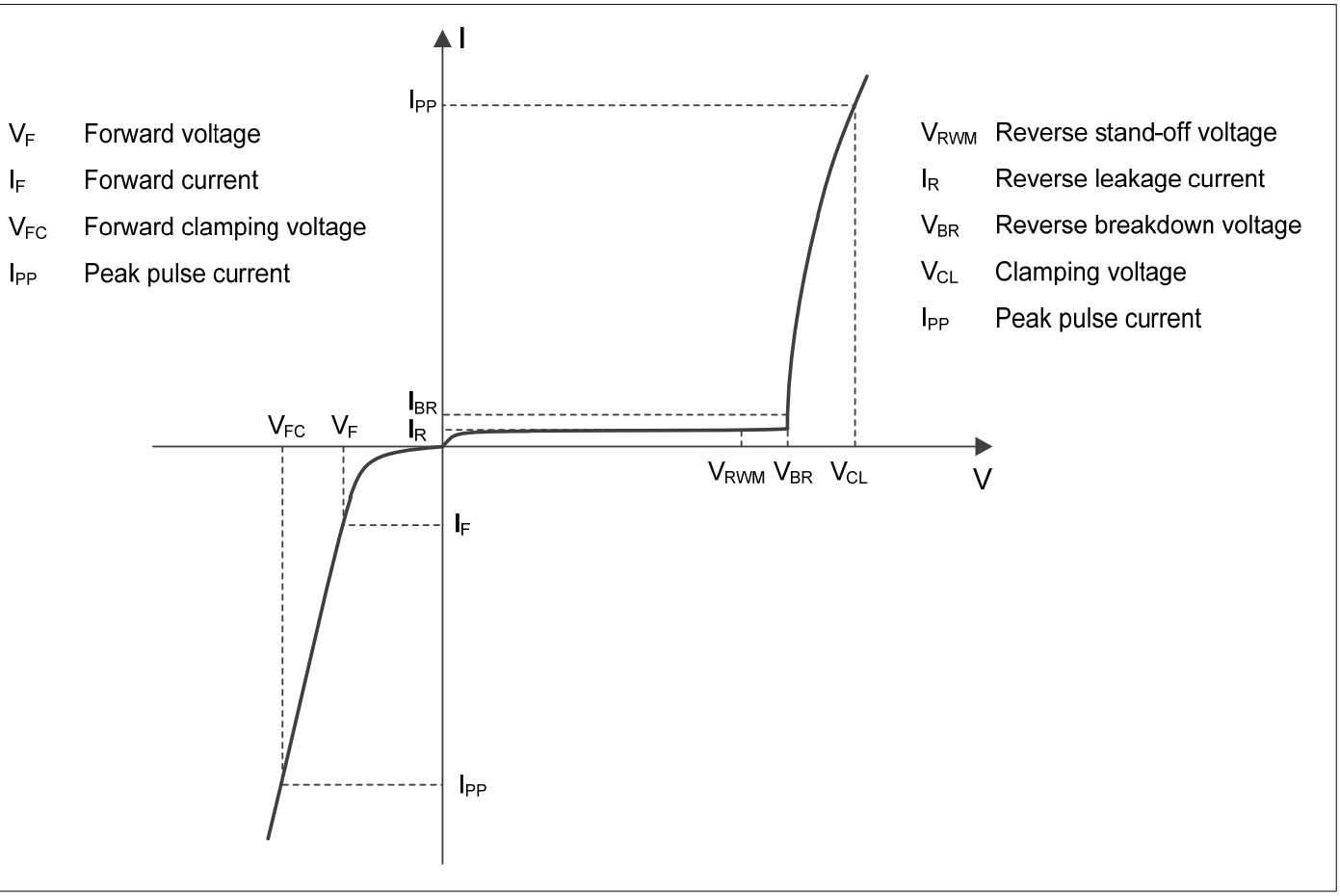
- Power supply protection
- Power management

Mechanical Characteristics

- Package: DFN1006-2L
- Case Material: “Green” Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Marking Information: See Below



■Definitions of electrical characteristics



■Absolute Maximum Ratings (Ta=25°C unless otherwise specified)

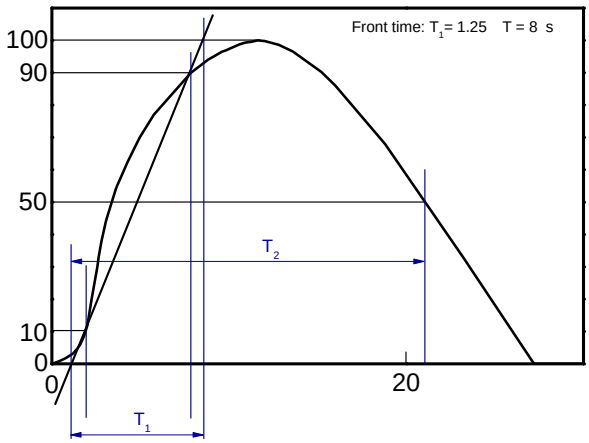
PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power (t_p = 8/20μs)	P_{pk}	650	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	25	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±30	KV
ESD according to IEC61000-4-2 contact discharge		±30	KV
Junction temperature	T_J	125	°C
Operating temperature	T_{OP}	-40~85	°C
Storage temperature	T_{STG}	-55~150	°C

■Electrical Characteristics (T_a=25 Unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V				12
Reverse leakage current	I_R	nA	V_{RWM} =12V			100
Reverse breakdown voltage	V_{BR}	V	I_{BR} = 1mA	13	14	17
Forward voltage	V_F	V	I_F = 20mA	0.45		1.25
Clamping voltage 1)	V_{CL}	V	I_{PP} = 16A, t_p = 100ns		17	
Dynamic resistance 1)	R_{DYN}	Ω			0.35	
Clamping voltage 2)	V_{CL}	V	V_{ESD} = 8kV		17	
Clamping voltage 3)	V_{CL}	V	I_{PP} = 1A, t_p = 8/20μs			16
		V	I_{PP} = 25A, t_p = 8/20μs			26
Junction capacitance	C_J	pF	V_R = 0V, f = 1MHz		90	110
		pF	V_R = 2.5V, f = 1MHz		80	100

■ Typical Performance Characteristics (Ta=25 unless otherwise Specified)

8/20 s waveform per IEC61000-4-5



Contact discharge current waveform per IEC61000-4-2

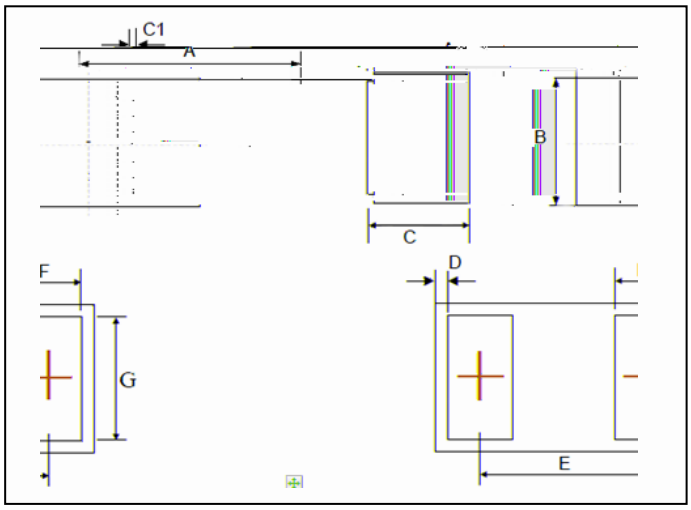
Clamping voltage vs. Peak pulse current

Capacitance vs. Reverse voltage

Non-repetitive peak pulse power vs. Pulse time

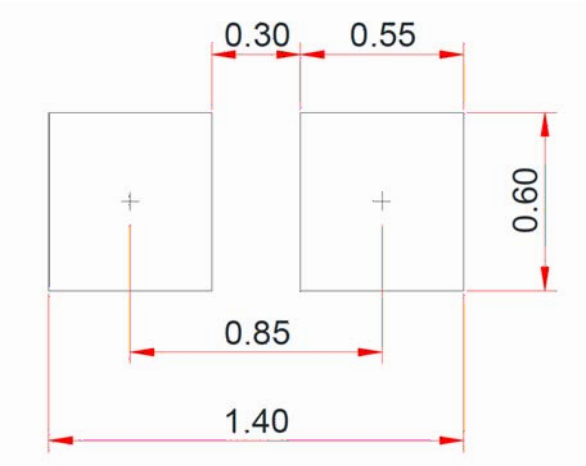
Power derating vs. Ambient temperature

■ Outline Dimensions



Symbol	min.(mm)	Max.(mm)
A	0.95	1.05
B	0.55	0.65
C	0.4	0.5
C1		0.05
D	0.01	0.08
E		0.65
F	0.2	0.3
G	0.45	0.55

■ Recommend land pattern (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

Disclaimer

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