

FEATURES

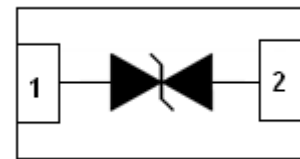
- ✧ Protects one bi-directional I/O line
- ✧ Low clamping voltage
- ✧ Low operating voltage: 12V
- ✧ RoHS compliant
- ✧ Compliant to Halogen-free
- ✧ Suffix "-Q1" for AEC-Q101

MAIN APPLICATIONS

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



DFN-2L(0402)



PIN Configuration

PROTECTION SOLUTION TO MEET

- ✧ IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)
- ✧ IEC61000-4-5 (Lightning) 4A (8/20μs)

MECHANICAL CHARACTERISTICS

- ✧ Package: DFN-2L(0402)
- ✧ Molding compound flammability rating : UL 94V-0
- ✧ Lead finish : lead free
- ✧ Marking code: AF or EF

ABSOLUTE MAXIMUM RATINGS (T_A=25°C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 8/20μs waveform	P _{PP}	100	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	+/-30	kV
ESD per IEC 61000-4-2 (Contact)		+/-30	
Lead soldering temperature	T _L	260 (10 sec.)	°C
Operating junction temperature range	T _J	-55 to +125	°C
Storage temperature range	T _{STG}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse working voltage	V _{RWM}				12	V
Reverse breakdown voltage	V _{BR}	I _T = 1mA	13.3			V
Reverse leakage current	I _R	V _{RWM} = 12V			200	nA
Peak pulse current	I _{PP}	t _p = 8/20μs			4	A
Clamping voltage	V _C	I _{PP} = 1A, t _p = 8/20μs		16	20	V
		I _{PP} = 4A, t _p = 8/20μs		22	26	V
Junction capacitance	C _J	V _{RWM} = 0V, f = 1MHz		35		pF

RATINGS AND V-I CHARACTERISTICS CURVES (T_A=25°C, unless otherwise noted)

FIG.1: V- I curve characteristics (Bi-directional)

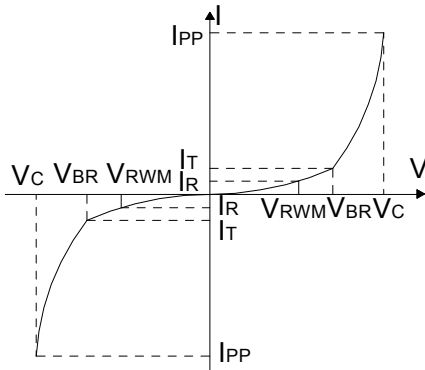


FIG.2: Pulse waveform (8/20μs)

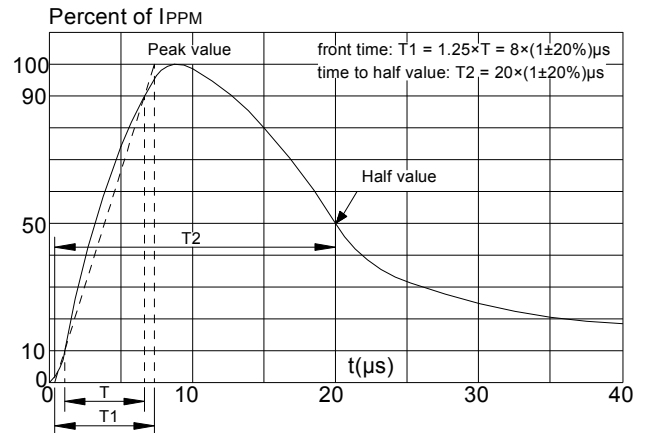


FIG.3: Pulse derating curve

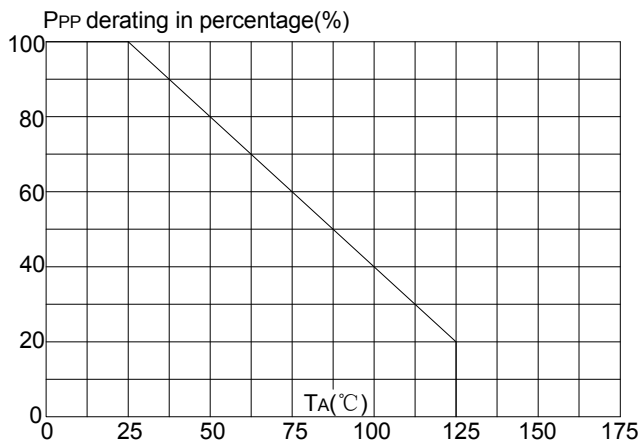
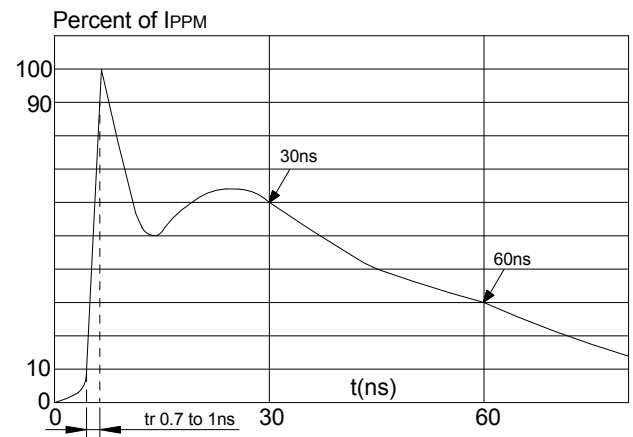
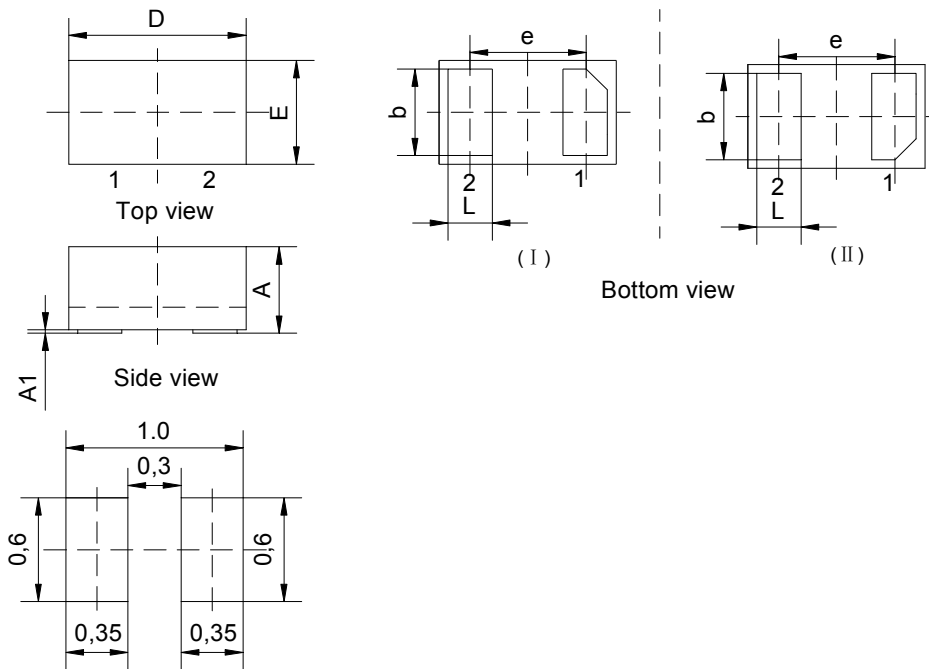


FIG.4: ESD clamping (30kV contact)



PACKAGE MECHANICAL DATA



Recommended soldering footprint(mm)

Symbol	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	0.40	0.50	0.55	0.016	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.45	0.50	0.55	0.018	0.020	0.022
D	0.95	1.00	1.05	0.037	0.039	0.041
e	0.65BSC			0.026BSC		
E	0.55	0.60	0.65	0.022	0.024	0.026
L	0.20	0.25	0.30	0.008	0.010	0.012