

APPLICATIONS

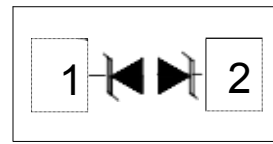
Serial ATA.
Desktops, Servers and Notebooks.
Cellular Phones.
MDDI Ports.
USB2.0 Power and Data Line Protection.
Display Ports
Digital Visual Interfaces (DVI).

FEATURES

Transient protection for high-speed data lines
IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (Air)
IEC 61000-4-2(ESD) $\pm 30\text{kV}$ (Contact)
IEC 61000-4-4 (EFT) 40A (5/50 ns)



DFN1006-2(Bottom view)



Pin Configuration(Top view)

ORDERING INFORMATION

Package: DFN1006-2
Marking: According to the physical
Material: Halogen free
Packing: Tape & Reel
Quantity per reel: 5,000pcs

MACHANICAL DATA

DFN1006-2 Package
Flammability Rating: UL 94V-0
Packaging: Tape and Reel
High temperature soldering guaranted: $260^{\circ}\text{C}/10\text{s}$
Reel size: 7 inch

Absolute maximum ratings(TA=25℃, 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) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	±30 ±30	kV
Lead soldering temperature	T _L	260 (10 sec.)	℃
Operating junction temperature range	T _J	-55 to +125	℃
Storage temperature range	T _{STG}	-55 to +150	℃

ELECTRICAL CHARACTERISTICS (TA=25℃)

PART NUMBER	V _{RWM} (V) (max.)	V _{BR} (V) (min.)	I _T (mA)	V _C @1A (max.)	V _C (max.) (@A)		I _R (μA) (max.)	C _J (pF) (typ.)
ESDA33CP	3.3	4	1	7	12	8	1	10
ESDA05CP	5	6	1	9.8	20	5	1	10
ESDA08CP	8	8.5	1	17.5	25	4	1	7

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

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

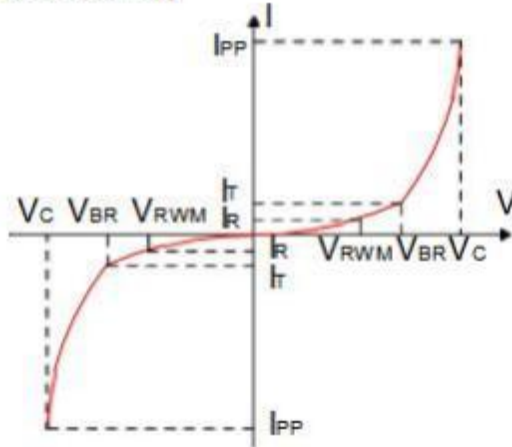


FIG.2: Pulse waveform (8/20μs)

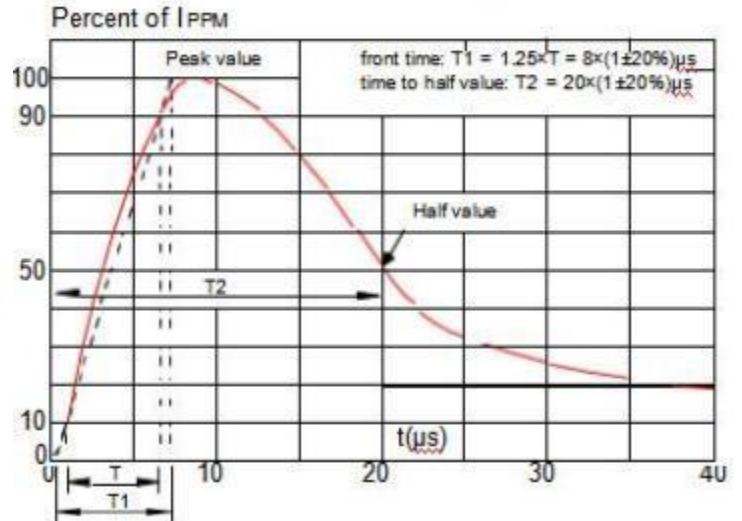


FIG.3: Pulse derating curve

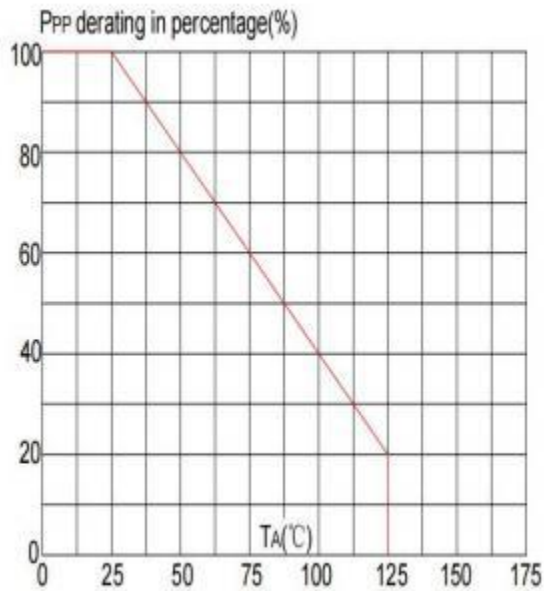
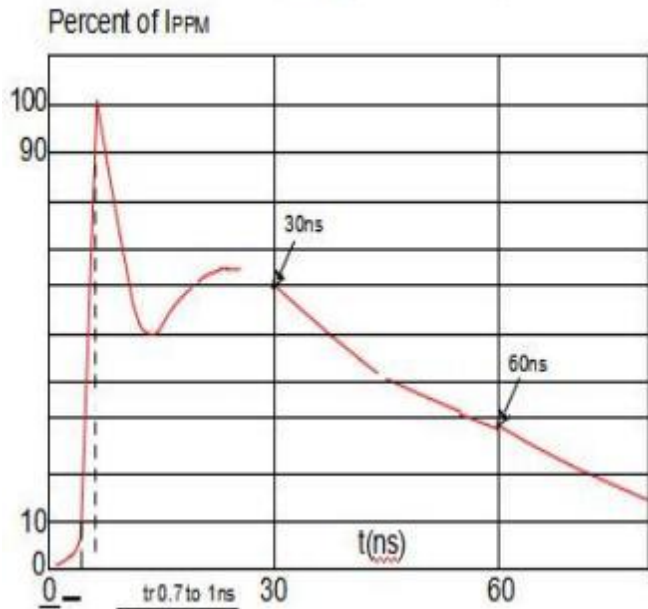
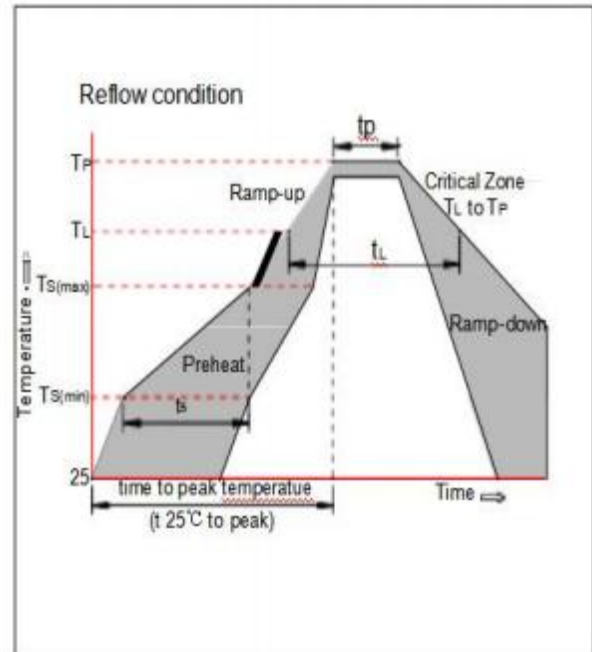


FIG.4: ESD clamping (20kV contact)

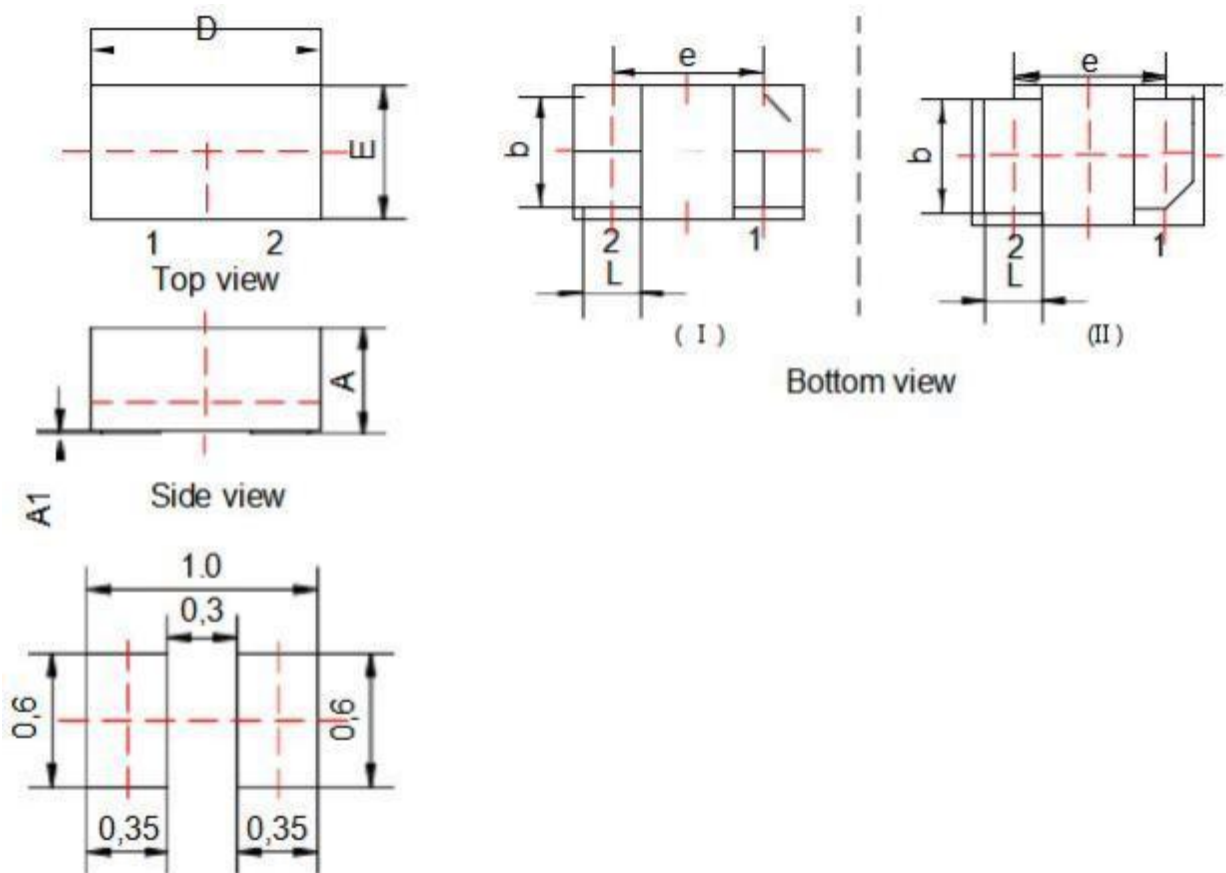


SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see figure at right)
Preheat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max ($T_{s(max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs.
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature (T_L) (Liquidus)	+217°C
	-Temperature (t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		20-40secs.
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C

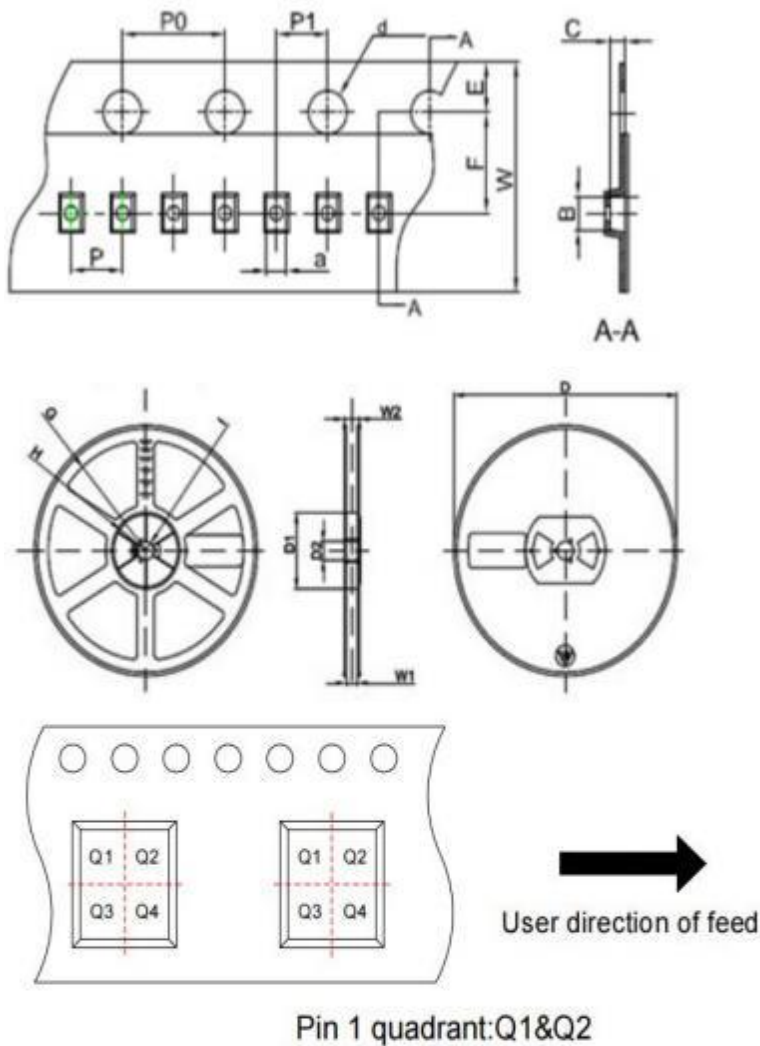


PACKAGE MECHANICAL DATA



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

TAPE AND REEL INFORMATION-DFN1006-2

Packaging Description:

DFN1006-2L parts are shipped in tape. The carrier tape is made from a dissipative(carbon filled) polycarbonate resin. The cover tape is a multilayer film(heat activated adhesive in nature)primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 10,000units per 7" or 17.8cm diameter reel. The reels are clear in color and made of polystyrene plastic(anti-static

Symbol	Millimeters	Inches
	Typ.	Typ.
a	0.66	0.026
B	1.15	0.045
C	0.66	0.026
d	Φ1.50	Φ0.059
E	1.75	0.069
F	3.50	0.138
P0	4.00	0.157
P	2.00	0.079
P1	2.00	0.079
W	8.00	0.315
D	Φ178	Φ7.008
D1	54.40	2.142
D2	13.00	0.512
G	R78.00	R3.071
H	R25.60	R1.008
I	R6.50	R0.256
W1	9.50	0.374
W2	12.30	0.484