



Continental Device India Pvt. Limited

An IATF 16949, ISO9001 and ISO 14001 Certified Company



Surface Mount TVS Diode

CDDFN2-T3.3B



SOD-882
DFN1006-2

DFN1006-2

Surface Mount Package

RoHS compliant

Marking Code = 3X

FEATURES:

1. Bidirectional TVS 3.3 V
2. Low Capacitance -13pF
3. ESD Protection 15 kV
4. DFN Package
5. RoHS compliant

APPLICATIONS:

1. Computers and Peripherals
2. Communication Systems
3. Audio & Video equipment
4. Portable instrumentation
5. Handheld portable devices

ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C Unless otherwise specified)

PARAMETER	SYMBOL	VALUE	UNITS
Storage Temperature	T _{STG}	-55 to +150	°C
Operating Temperature	T _{OPR}	-55 to +85	°C
ESD Protection per IEC 61000-4-2	Contact Discharge	15	kV
	Air Discharge	15	kV
EFT Protection per IEC 61000-4-4 (5/50 ns)	E _{FT}	50	A
Peak Pulse Current per IEC 61000-4-5 (8/20 μs)	I _{pp}	5	A

ELECTRICAL CHARACTERISTICS (Ta = 25 °C Unless otherwise specified)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Working Peak Voltage	V _{WM}	-3.3	--	3.3	V
Breakdown Voltage @ 1mA	V _{BR}	4	--	6.5	V
Leakage Current @ 3.3V	I _L	--	0.1	1.0	μA
Capacitance @ 0 V, 1MHz	C _J	--	13.5	16.5	pF
Clamping Voltage @ IPP = 5 A, 8/20μs	V _C	--	6.5	8	V

CDDFN2-T3.3B

Rev04_13102022E

TYPICAL CHARACTERISTICS CURVES

Fig 1: Pulse Waveform

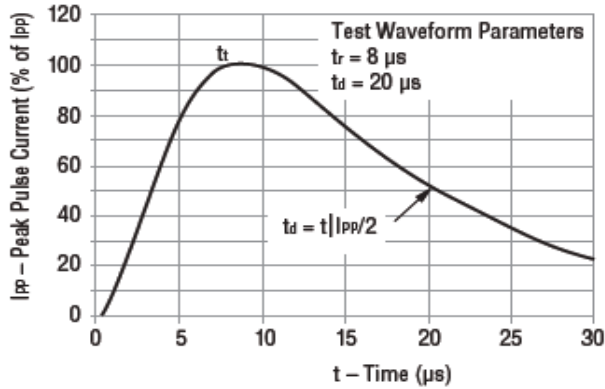


Fig 2: TLP I-V Plot

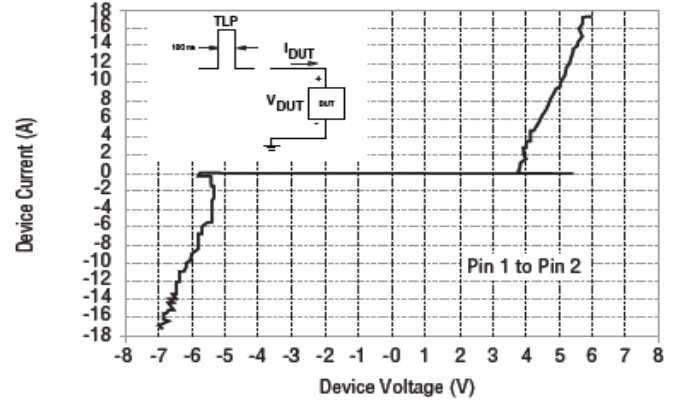
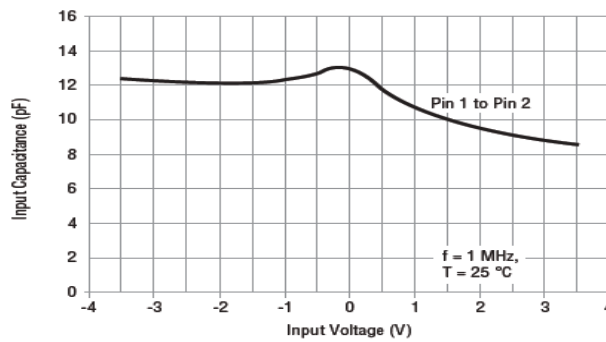
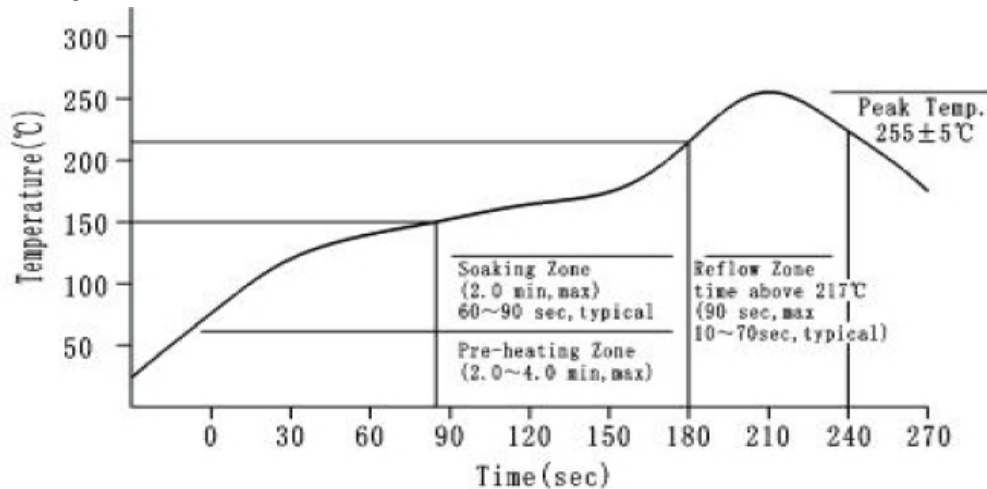


Fig 3: Typical Capacitance Variation of C_{IN} vs V_{IN}



Temperature Profile



Reflux welding temperature: $260 \text{ }^\circ\text{C}$

Wave soldering temperature: $250 \text{ }^\circ\text{C}$

CDDFN2-T3.3B
 Rev04_13102022E



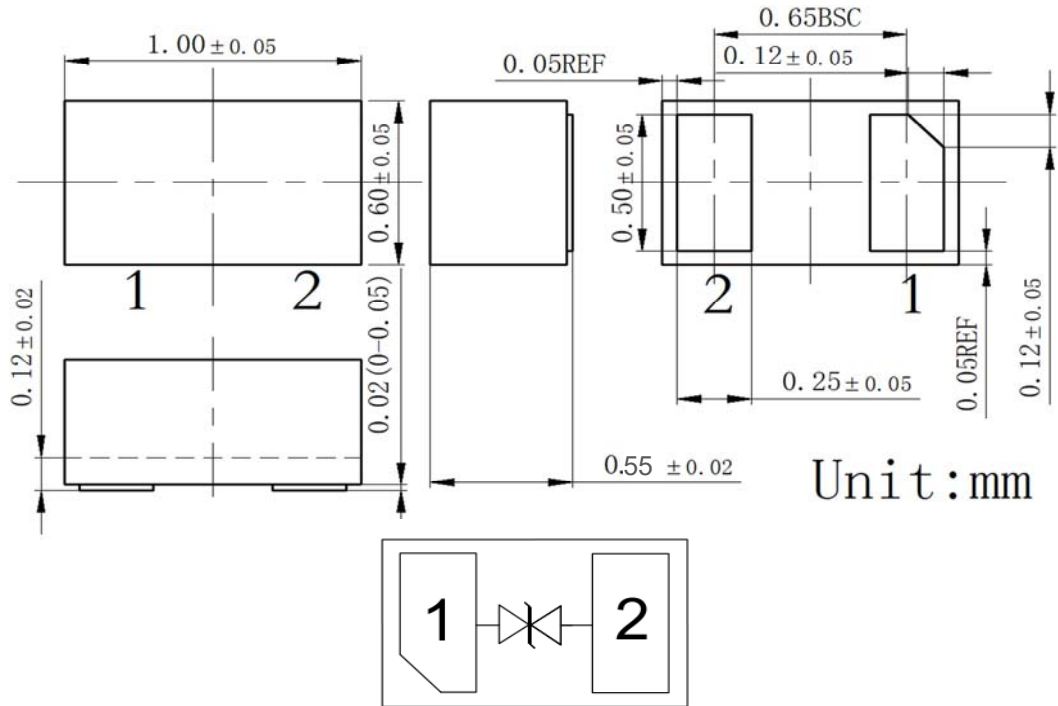
Continental Device India Pvt. Limited

An IATF 16949, ISO9001 and ISO 14001 Certified Company



Package Details

DFN1006-2 Surface mount package



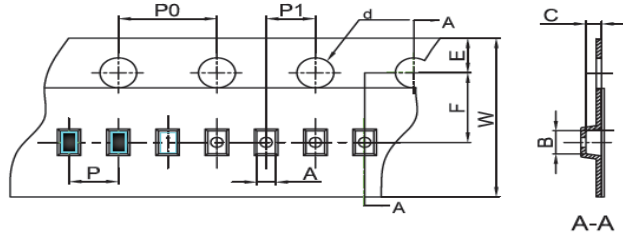
CDDFN2-T3.3B
Rev04_13102022E

Packing Details

DFN(1.0*0.6)-2L

Tape and reel

Embossed Carrier Tape



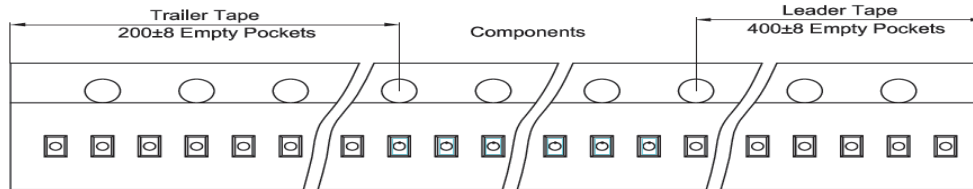
Packaging Description:

DFN/FBP(1.0×0.6×0.5) 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 5,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
DFN/FBP(1.0×0.6×0.5)	0,66	1,15	0,55	Ø1,50	1,75	3,50	4,00	2,00	2,00	8,00
(Tolerance)	+/-0.05	+/-0.05	+/-0.05	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+0.3/-0.1

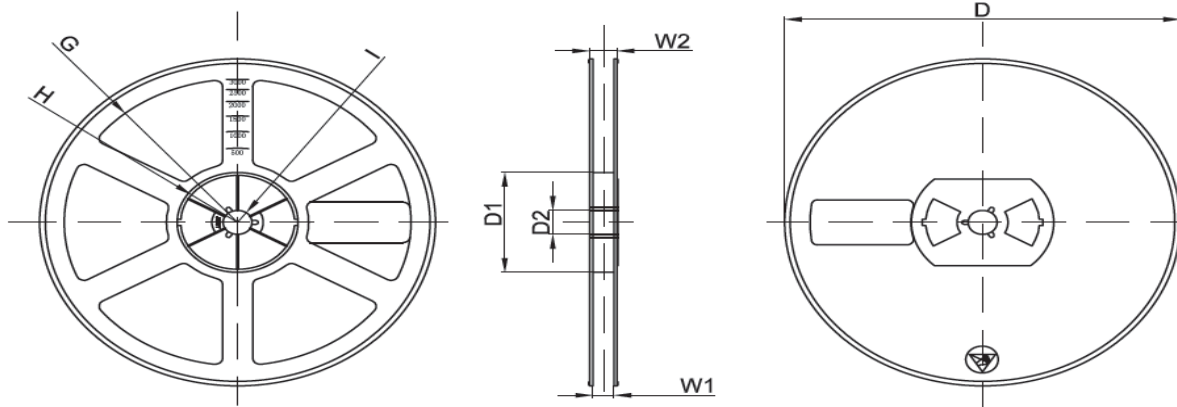
DFN(1.0*0.6)-2L

Tape Leader and Trailer



DFN(1.0*0.6)-2L

Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178,00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	+/-2	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
10000 pcs	7 inch	150,000 pcs	203×203×195	600,000 pcs	438×438×220	



Continental Device India Pvt. Limited

An IATF 16949, ISO9001 and ISO 14001 Certified Company



Recommended Product Storage Environment for Discrete Semiconductor Devices

This storage environment assumes that the Diodes and transistors are packed properly inside the original packing supplied by CDIL.

- Temperature 5 °C to 30 °C
- Humidity between 40 to 70 %RH
- Air should be clean.
- Avoid harmful gas or dust.
- Avoid outdoor exposure or storage in areas subject to rain or water spraying .
- Avoid storage in areas subject to corrosive gas or dust. Product shall not be stored in areas exposed to direct sunlight.
- Avoid rapid change of temperature.
- Avoid condensation.
- Mechanical stress such as vibration and impact shall be avoided.
- The product shall not be placed directly on the floor.
- The product shall be stored on a plane area. They should not be turned upside down. They should not be placed against the wall.

Shelf Life of CDIL Products

The shelf life of products is the period from product manufacture to shipment to customers. The product can be unconditionally shipped within this period. The period is defined as 2 years.

If products are stored longer than the shelf life of 2 years the products shall be subjected to quality check as per CDIL quality procedure.

The products are further warranted for another one year after the date of shipment subject to the above conditions in CDIL original packing.

Floor Life of CDIL Products and MSL Level

When the products are opened from the original packing, the floor life will start.

For this, the following JEDEC table may be referred:

JEDEC MSL Level		
Level	Time	Condition
1	Unlimited	≤30 °C / 85% RH
2	1 Year	≤30 °C / 60% RH
2a	4 Weeks	≤30 °C / 60% RH
3	168 Hours	≤30 °C / 60% RH
4	72 Hours	≤30 °C / 60% RH
5	48 Hours	≤30 °C / 60% RH
5a	24 Hours	≤30 °C / 60% RH
6	Time on Label(TOL)	≤30 °C / 60% RH

CDDFN2-T3.3B
Rev04_13102022E



Continental Device India Pvt. Limited

An IATF 16949, ISO9001 and ISO 14001 Certified Company



CUSTOMER NOTES

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s). CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.



CDIL is a registered trademark of
Continental Device India Pvt. Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.

Telephone +91-11-2579 6150, 4141 1112 Fax +91-11-2579 5290, 4141 1119

email@cdil.com www.cdil.com

CIN No. U32109DL1964PTC004291

CDDFN2-T3.3B
Rev04_13102022E