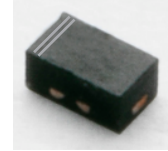


# CPDQT3V3U-HF Thru. CPDQT12V0U-HF

**RoHS Device**  
**Halogen Free**



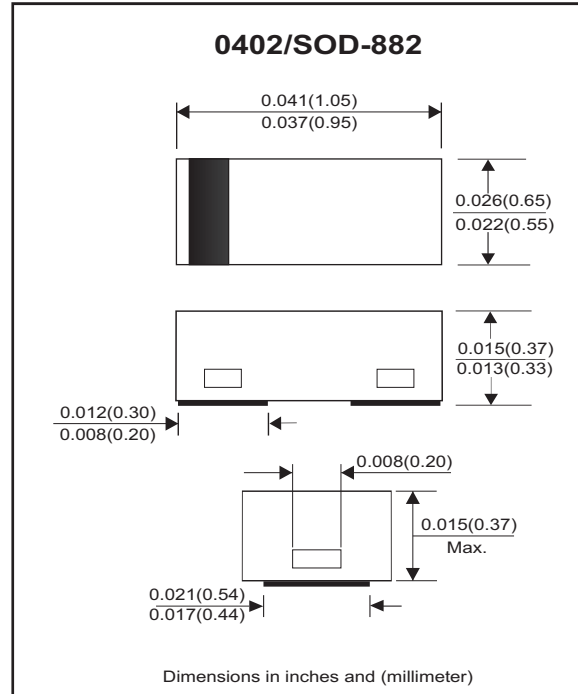
## Features

- IEC61000-4-2 Level 4 ESD protection.
- ESD Rating of Class 3 per Human Body Mode.
- Low Leakage
- Response Time is Typically <1ns

## Mechanical data

- Case: 0402/SOD-882 small outline plastic package.
- Terminals: Matte tin plated, solderable per MIL-STD-750, method 2026.
- Mounting position: Any.

## Circuit Diagram



## Maximum Rating (TA=25°C unless otherwise Specified)

Parameter	Symbol	Value	Unit
Total power dissipation on FR-5 board @TA=25°C (Note 1)	P <sub>D</sub>	150	mW
ESD per IEC 61000-4-2(Contact) ESD per IEC 61000-4-2(Air)	V <sub>ESD</sub>	±8 ±15	kV
Lead Soldering Temperature - Maximum (10 second duration)	T <sub>L</sub>	260 (10 sec.)	°C
Junction temperature range	T <sub>J</sub>	-55 to +150	°C
Storage temperature range	T <sub>STG</sub>	-55 to +150	°C

Notes: 1. FR-5=1.0\*0.75\*0.62 in.

## Electrical Characteristics (TA=25°C unless otherwise noted, VF=0.9V Max.@ IF=10mA for all types)

Part No.	V <sub>RWN</sub> (V)	I <sub>R</sub> (uA) @V <sub>RWM</sub>	V <sub>BR</sub> (V) @I <sub>T</sub> (Note 2)	I <sub>T</sub> (mA)	I <sub>PP</sub> (A) (Note 3)	V <sub>C</sub> (V) @Max I <sub>PP</sub> (Note 3)	PPK (W) (8*20µs)	C <sub>J</sub> (pF)
	Max.	Max.	Min.		Max.	Max.	Typ.	Typ.
CPDQT3V3U-HF	3.3	2.5	5.0	1	9.8	10.4	102	80
CPDQT5V0U-HF	5.0	1.0	6.2	1	8.7	12.3	107	65
CPDQT12V0U-HF	12	1.0	13.3	1	5.9	23.7	140	30

- Notes: 1. Other voltage available upon request.  
 2. V<sub>BR</sub> is measured with a pulse test current I<sub>T</sub> at an ambient temperature of 25°C  
 3. Surge current waveform per Figure 3.

Company reserves the right to improve product design , functions and reliability without notice.

## RATING AND CHARACTERISTIC CURVES (CPDQT3V3U-HF Thru. CPDQT12V0U-HF)

Fig.1- Typical Breakdown Voltage Versus Temperature

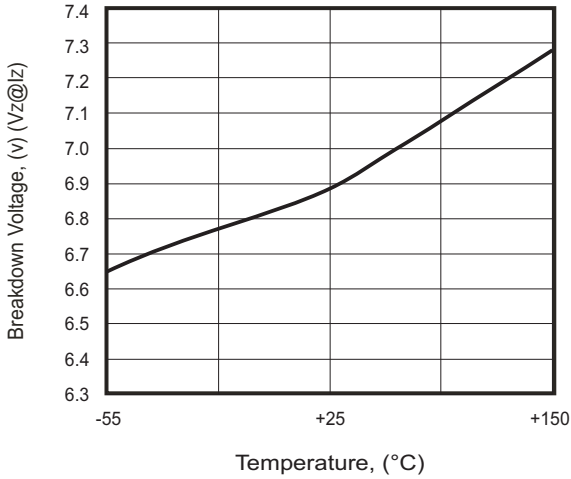


Fig.2- Typical Leakage Current Versus Temperature

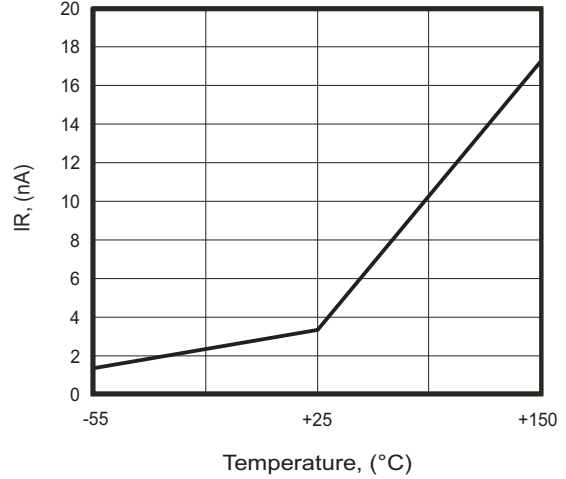


Fig.3- 8/20us Peak Pulse Current Waveform Acc. IEC 6100-4-5

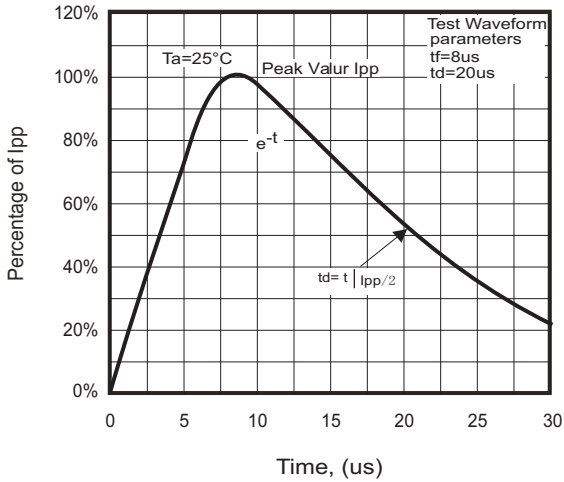
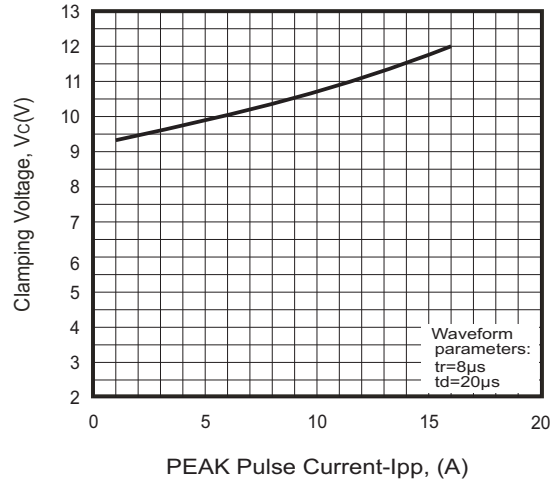
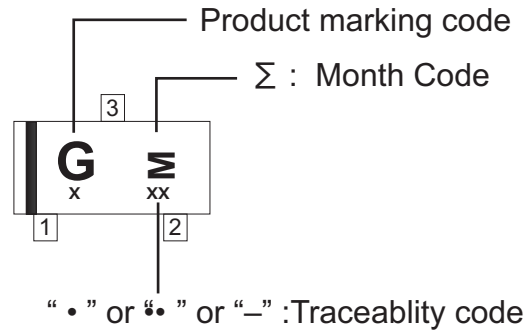


Fig.4- Normalized Junction Capacitance Voltage vs. Reverse Voltage



## Marking Code

Part Number	Marking Code
CPDQT3V3U-HF	E
CPDQT5V0U-HF	G
CPDQT12V0U-HF	H



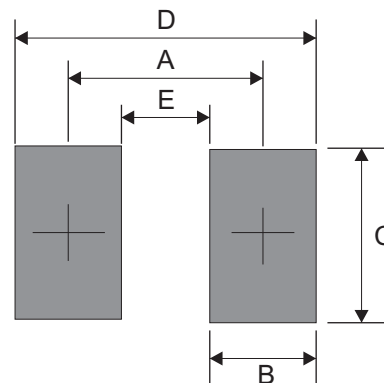
## Month Code:

Month	Odd Year (per A.D.)	Even Year (per A.D.)
Jan	1	E
Feb	2	F
Wer	3	H
Apr	4	J
May	5	K
Jun	6	L

Month	Odd Year (per A.D.)	Even Year (per A.D.)
Jul	7	N
Aug	8	P
Sep	9	U
Oct	T	X
Nov	V	Y
Dec	C	Z

## Suggested PAD Layout

SIZE	0402/SOD-882	
	(mm)	(inch)
A	0.700	0.028
B	0.400	0.016
C	0.700	0.028
D	1.100	0.043
E	0.300	0.012



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
0402/SOD-882	10,000	7