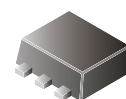


# CPDH6-5V0U-HF

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

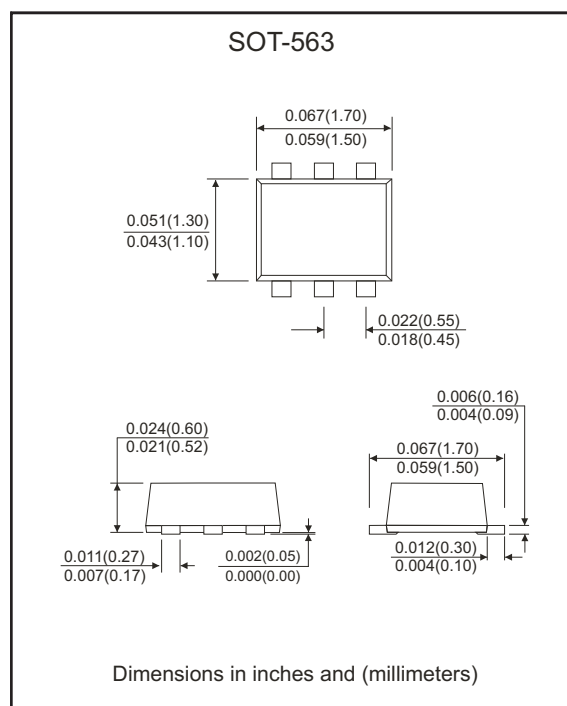


## Features

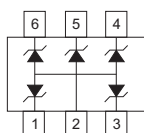
- IEC61000-4-2 Level 4 ESD protection
- Surface mount package.
- High component density.

## Mechanical data

- Case: SOT-563 Standard package, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Marking code: E5U
- Mounting position: Any.
- Weight: 0.0034 gram (approx.).



## Circuit diagram



## Maximum Rating and Electrical Characteristics

(at TA=25°C unless otherwise noted)

| Parameter               | Symbol    | Conditions                                                       | Min | Typ | Max     | Unit |
|-------------------------|-----------|------------------------------------------------------------------|-----|-----|---------|------|
| Diode breakdown voltage | $V_{BD}$  | $I_R = 1mA$                                                      | 6.1 |     |         | V    |
| Leakage current         | $I_L$     | $V_R = 3V$                                                       |     | 0.1 | 1.0     | uA   |
| Forward voltage         | $V_F$     | $I_F = 10mA$                                                     |     |     | 1.2     | V    |
| Junction capacitance    | $C_T$     | $V_R = 0V, f = 1MHz$                                             |     | 60  | 80      | pF   |
| Clamping voltage        | $V_C$     | $I_{PP} = 1A, T_P = 8/20\mu s$<br>$I_{PP} = 8A, T_P = 8/20\mu s$ |     |     | 8<br>10 | V    |
| ESD capability          | ESD       | IEC 61000-4-2(air)<br>IEC 61000-4-2(contact)                     |     |     | 15<br>8 | kV   |
| Peak pulse power        | $P_{PP}$  |                                                                  |     |     | 80      | W    |
| Operation temperature   | $T_J$     |                                                                  |     |     | 125     | °C   |
| Storage temperature     | $T_{STG}$ |                                                                  | -55 |     | 150     | °C   |

## RATING AND CHARACTERISTIC CURVES (CPDH6-5V0U-HF)

Fig. 1 - 8/20us Peak pulse current waveform acc. IEC 61000-4-5

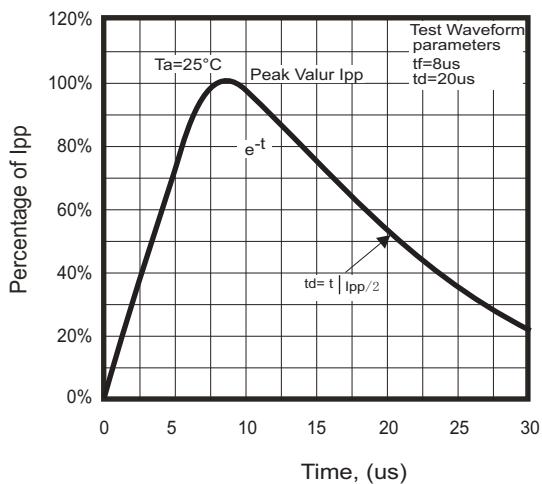


Fig.2 - Power rating derating curve

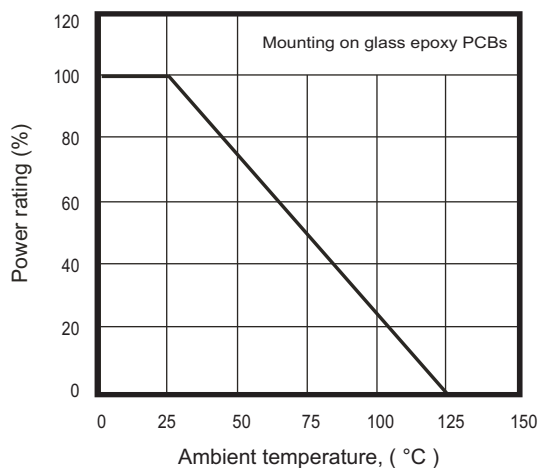


Fig.3 - Clamping voltage vs. peak pulse current

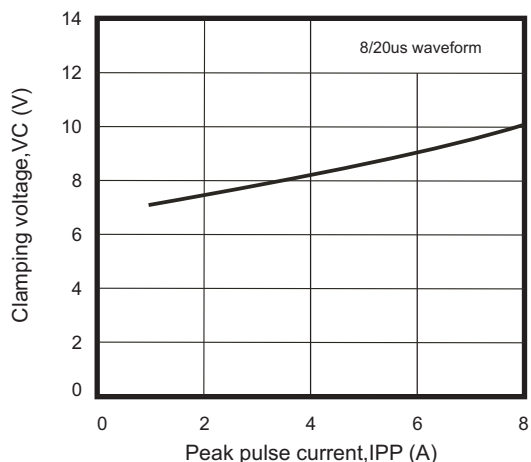
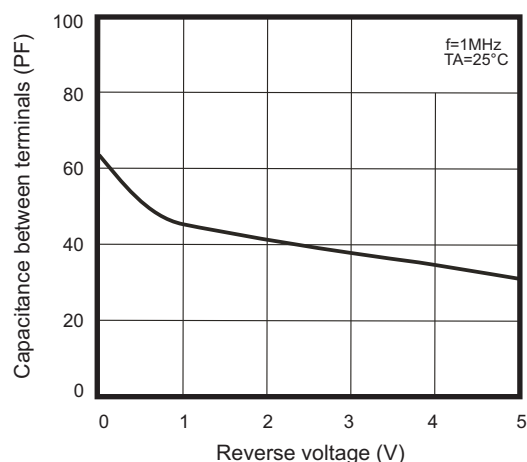
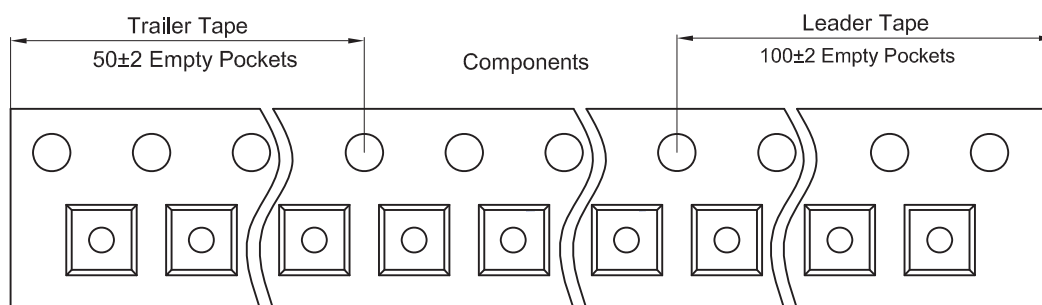
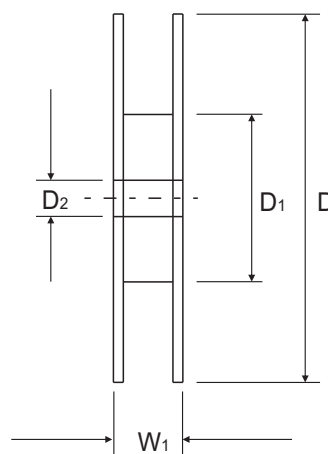
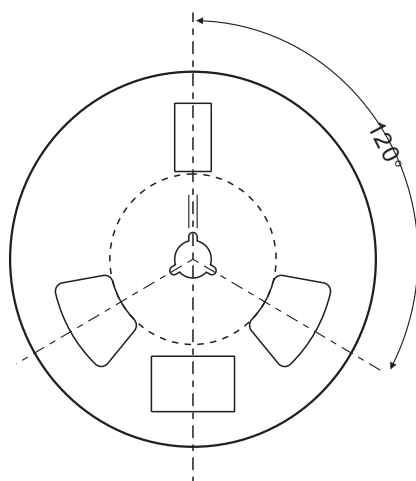
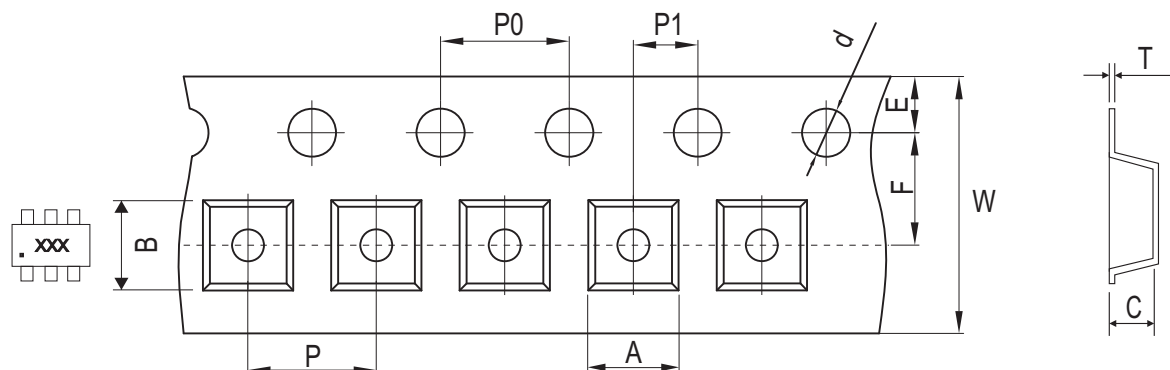


Fig.4 - Capacitance between terminals characteristics



## Reel Taping Specification

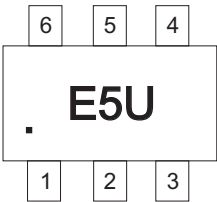


| SOT-563 | SYMBOL | A             | B             | C             | d             | D             | D1            | D2            |
|---------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|         | (mm)   | 1.78 ± 0.10   | 1.78 ± 0.10   | 0.69 ± 0.10   | 1.50 ± 0.10   | 178 ± 2.00    | 54.4 ± 1.00   | 13.0 ± 1.00   |
|         | (inch) | 0.070 ± 0.004 | 0.070 ± 0.004 | 0.027 ± 0.004 | 0.059 ± 0.004 | 7.008 ± 0.079 | 2.142 ± 0.040 | 0.512 ± 0.040 |

| SOT-563 | SYMBOL | E             | F             | P             | P0            | P1            | W             | W1            |
|---------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|         | (mm)   | 1.75 ± 0.10   | 3.50 ± 0.05   | 4.00 ± 0.10   | 4.00 ± 0.10   | 2.00 ± 0.10   | 8.00 ± 0.10   | 12.30 ± 1.00  |
|         | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.315 ± 0.004 | 0.567 ± 0.040 |

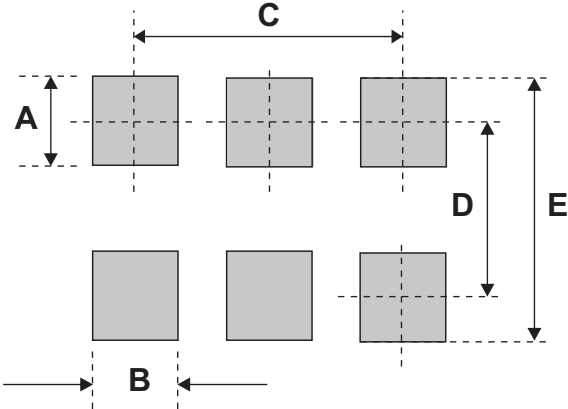
Marking Code

| Part Number   | Marking Code |
|---------------|--------------|
| CPDH6-5V0U-HF | E5U          |



Suggested PAD Layout

| SIZE | SOT-563 |        |
|------|---------|--------|
|      | (mm)    | (inch) |
| A    | 0.30    | 0.012  |
| B    | 0.30    | 0.012  |
| C    | 1.00    | 0.039  |
| D    | 1.40    | 0.055  |
| E    | 1.70    | 0.067  |



Standard Packaging

| Case Type | REEL PACK       |                     |
|-----------|-----------------|---------------------|
|           | REEL<br>( pcs ) | Reel Size<br>(inch) |
| SOT-563   | 3,000           | 7                   |