

CPDUR5V0H-HF

RoHS Device
Halogen Free

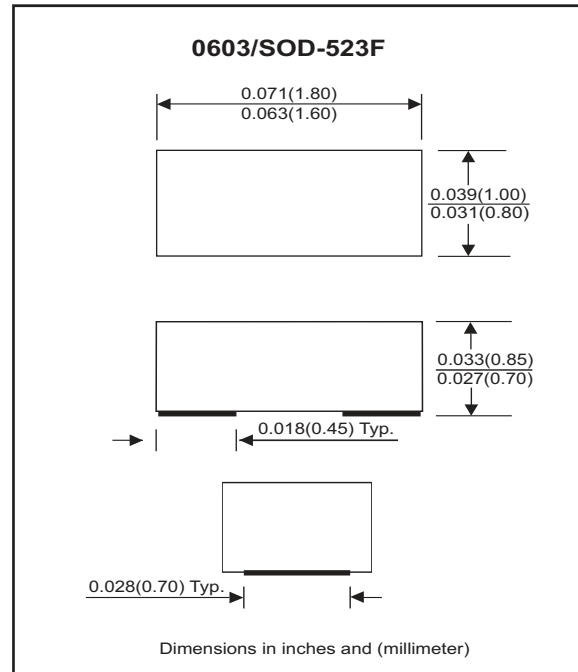


Features

- Bi-directional ESD protection
- IEC 61000-4-5 (surge) ; IPP=7A
- IEC 61000-4-2 (ESD) ; ±30KV(contact)
- Low clamping voltage
- Low leakage current

Mechanical data

- Case: 0603/SOD-523F Standard package , molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Marking Code: E05
- Mounting position: Any.
- Weight: 0.003 gram (approx.).



Maximum Rating and Electrical Characteristics (at TA=25 °C unless otherwise noted)

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|-------------------------|---|------------------|-----|-----|-----|------|
| Diode breakdown voltage | I _R = 1mA | V _{BD} | 5.5 | 7.0 | | V |
| Leakage current | V _R = 5V | I _L | | | 1.0 | uA |
| Junction capacitance | V _R = 0V, f = 1MHz | C _T | | | 20 | pF |
| ESD capability | IEC 61000-4-2(air) | ESD | | | 30 | kV |
| | IEC 61000-4-2(contact) | ESD | | | 30 | kV |
| Clamping Voltage | I _{PP} = 1 A, t _p =8/20us | V _c | | | 11 | V |
| | I _{PP} = 7 A, t _p =8/20us | V _c | | | 20 | V |
| Peak Pulse Power | T _p =8/20us | P _{PP} | | | 140 | W |
| Operation temperature | | T _j | | | 125 | °C |
| Storage temperature | | T _{STG} | -55 | | 150 | °C |

RATING AND CHARACTERISTIC CURVES (CPDUR5V0H-HF)

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

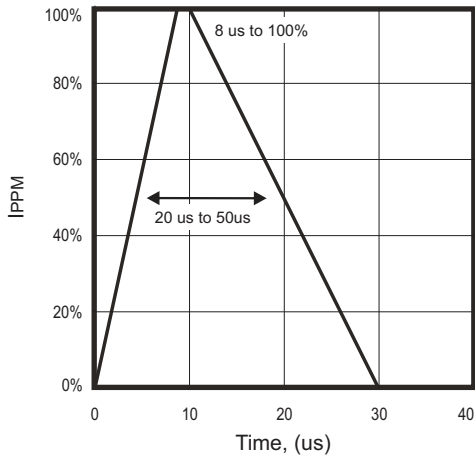


Fig. 2 - Capacitance between terminals characteristics

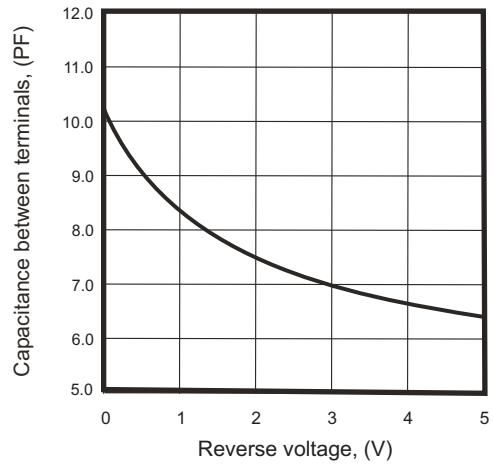


Fig.3 - Clamping voltage vs. peak pulse current

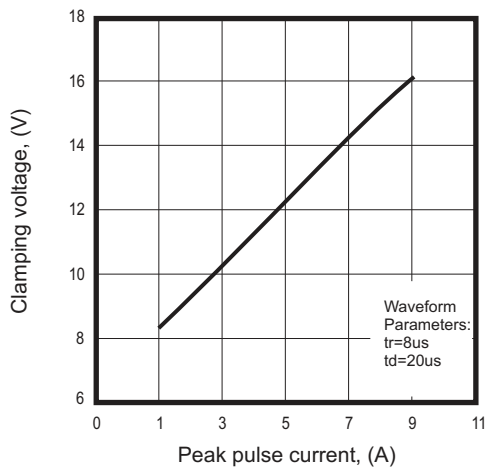
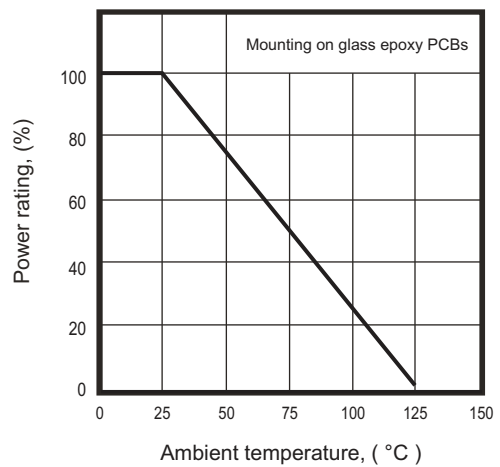
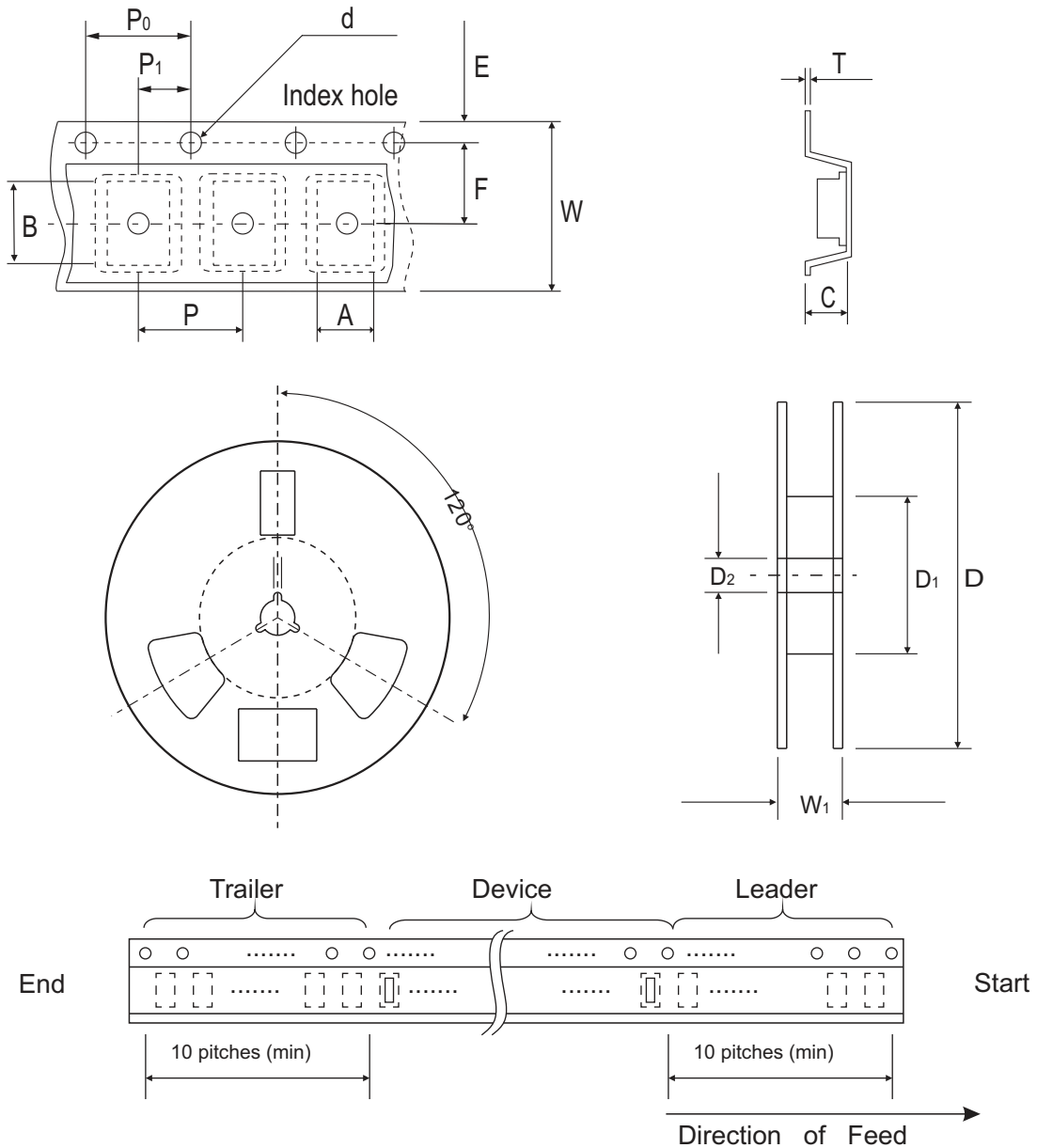


Fig. 4 - Power rating derating curve



Reel Taping Specification



| 0603 (SOD-523F) | SYMBOL | A | B | C | d | D | D ₁ | D ₂ |
|--------------------|--------|---------------|---------------|---------------|---------------|--------------|----------------|----------------|
| | (mm) | 1.00 ± 0.10 | 1.85 ± 0.10 | 1.00 ± 0.10 | 1.55 ± 0.05 | 178 ± 1 | 60.0 MIN. | 13.0 ± 0.20 |
| | (inch) | 0.039 ± 0.004 | 0.073 ± 0.004 | 0.039 ± 0.004 | 0.061 ± 0.002 | 7.008 ± 0.04 | 2.362 MIN. | 0.512 ± 0.008 |

| 0603 (SOD-523F) | SYMBOL | E | F | P | P | P | T | W | W ₁ |
|--------------------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.05 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 | 0.23 ± 0.05 | 8.00 ± 0.20 | 13.5 MAX. |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.009 ± 0.002 | 0.315 ± 0.008 | 0.531 MAX. |

Marking Code

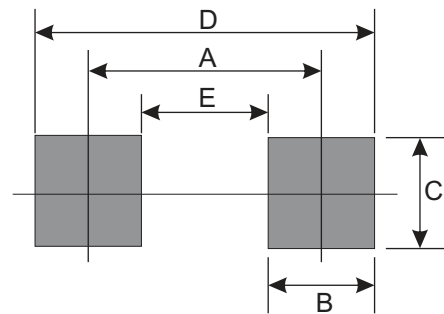
| Part Number | Marking Code |
|--------------|--------------|
| CPDUR5V0H-HF | E05 |



xxx = Product type marking code

Suggested PAD Layout

| SIZE | 0603/SOD-523F | |
|------|---------------|--------|
| | (mm) | (inch) |
| A | 1.25 | 0.049 |
| B | 0.60 | 0.024 |
| C | 1.00 | 0.039 |
| D | 1.85 | 0.073 |
| E | 0.65 | 0.026 |



Standard Packaging

| Case Type | Qty Per Reel | Reel Size |
|---------------|--------------|-----------|
| | (Pcs) | (inch) |
| 0603/SOD-523F | 4,000 | 7 |