

CDBURT0530LL-HF

Forward Current = 500 mA
Reverse Voltage = 20 Volts

RoHS Device
Halogen Free

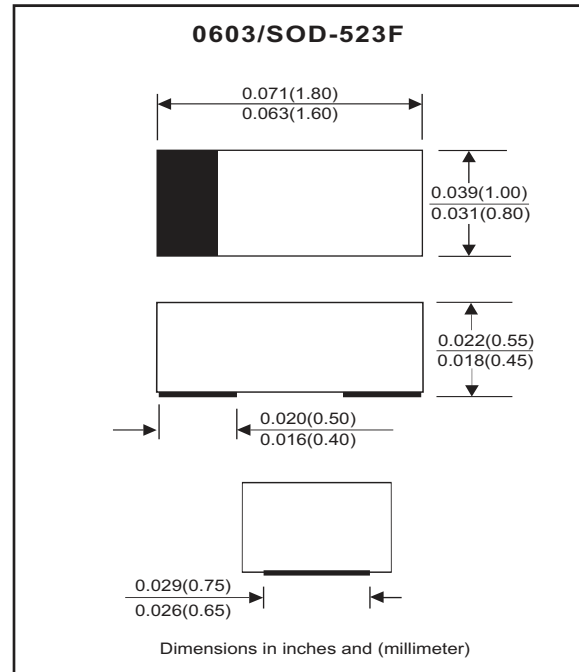


Features

- Ultra low forward voltage.
- Designed for mounting on small surface.
- Extremely thin / leadless package.
- Low profile package is 30% thinner than standards 0603
- Majority carrier conduction.
- ESD Rating: -Human Body Model: Class 3B
-Machine Model: Class C

Mechanical data

- Case: 0603/SOD-523F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750,method 2026.
- Polarity: Indicated by cathode band.
- Marking code: BT,BS
- Mounting Position: Any
- Weight: 0.0019 grams(approx.).



Circuit diagram



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

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|---------------------------------|---|------------------|-----|-----|------|------|
| Repetitive peak reverse voltage | | V _{RRM} | | | 30 | V |
| Reverse voltage | | V _R | | | 20 | V |
| Average forward current | | I _O | | | 500 | mA |
| Forward current, surge peak | 8.3ms single half sine-wave superimposed on rate load(JEDEC method) | I _{FSM} | | | 5 | A |
| Typical thermal resistance | | R _{θJA} | | 260 | | °C/W |
| Junction temperature range | | T _j | -55 | | +125 | °C |
| Storage temperature range | | T _{STG} | -55 | | +125 | °C |

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

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|-----------------|--|----------------|-----|-----|--------------|------|
| Forward voltage | I _F = 100 mA I _F = 500 mA | V _F | | | 0.32 0.46 | V |
| Reverse Current | V _R = 20 V | I _R | | 30 | 100 | uA |
| Capacitance | V _R = 1 V, f=1MHz | C | | 30 | | pF |

RATING AND CHARACTERISTIC CURVES (CDBURT0530LL-HF)

Fig.1 - Forward Current vs. Forward Voltage

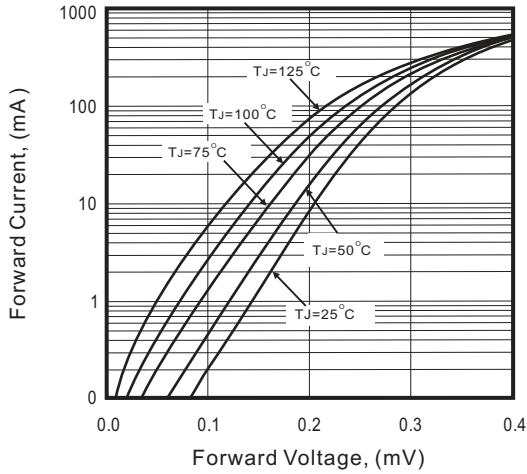


Fig.2 - Reverse Current vs. Reverse Voltage

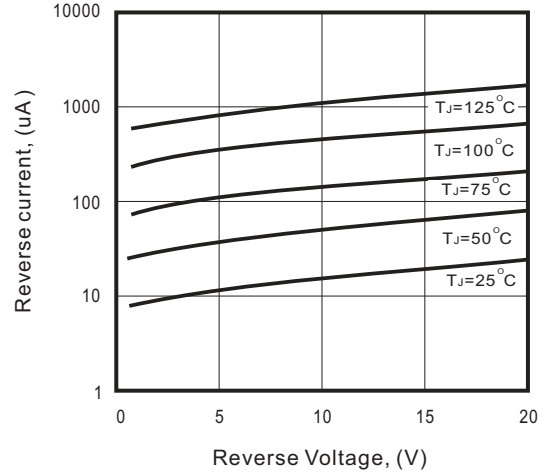


Fig.3 - Current Derating Curve

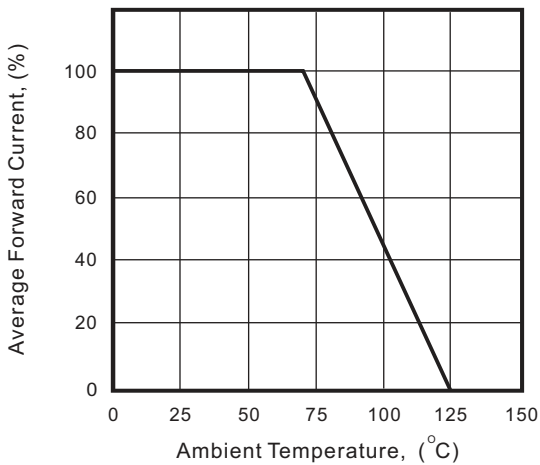
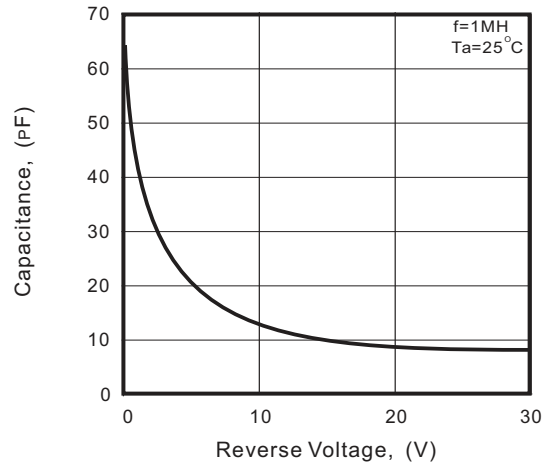
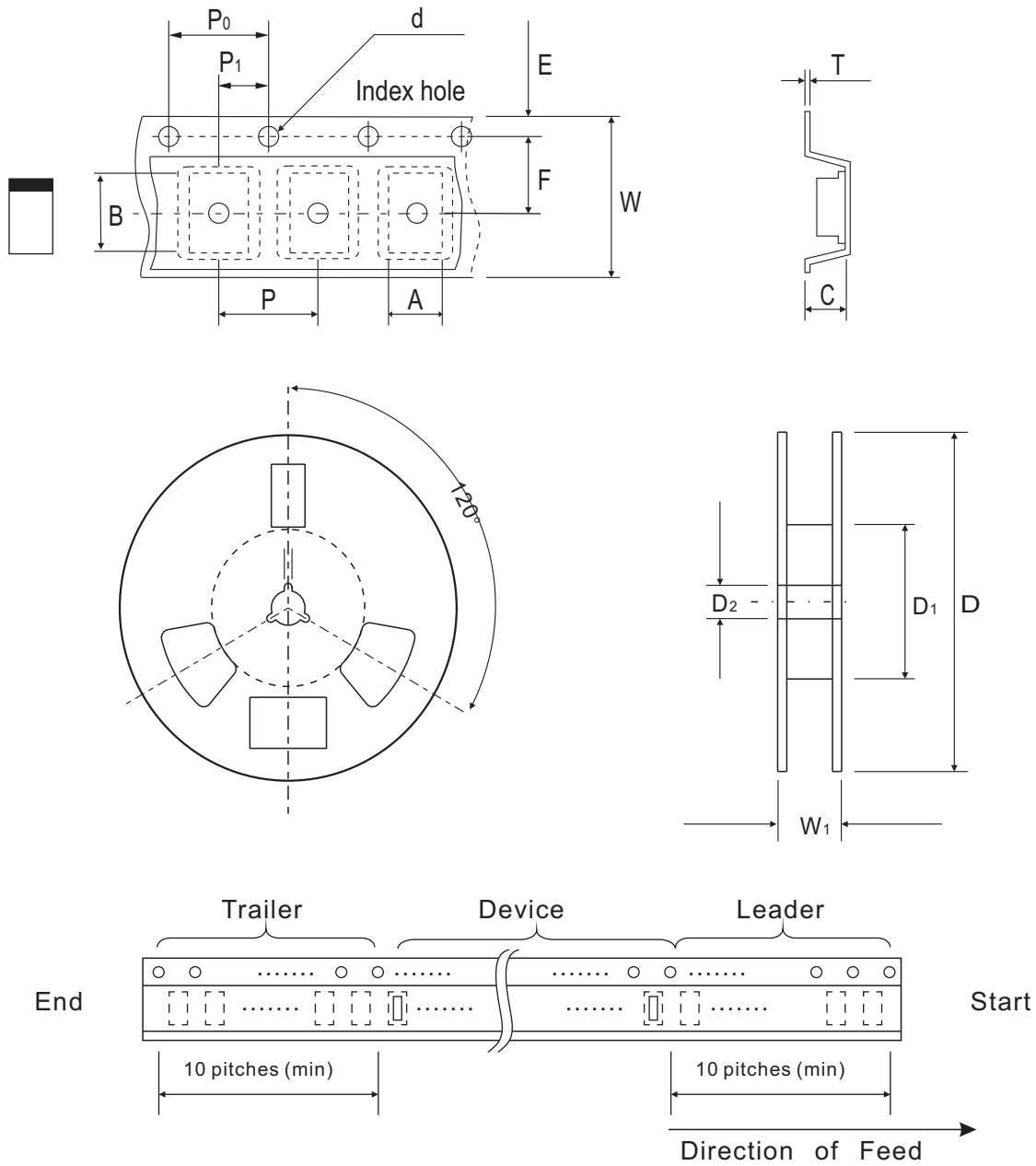


Fig.4 - Capacitance Between Terminals Characteristics



Reel Taping Specification



| 0603 (SOD-523F) | SYMBOL | A | B | C | d | D | D ₁ | D ₂ |
|--------------------|--------|---------------|---------------|---------------|---------------|--------------|----------------|----------------|
| | (mm) | 1.05 ± 0.05 | 1.96 ± 0.05 | 0.57 ± 0.05 | 1.50 + 0.10 | 178 ± 1 | 60.0 MIN. | 13.0 ± 0.20 |
| | (inch) | 0.041 ± 0.002 | 0.077 ± 0.002 | 0.022 ± 0.002 | 0.059 ± 0.004 | 7.008 ± 0.04 | 2.362 MIN. | 0.512 ± 0.008 |

| 0603 (SOD-523F) | SYMBOL | E | F | P | P ₀ | P ₁ | T | W | W ₁ |
|--------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.05 | 4.00 ± 0.10 | 4.00 ± 0.05 | 2.00 ± 0.05 | 0.20 ± 0.03 | 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 ± 0.002 | 0.008 ± 0.001 | 0.315 ± 0.008 | 0.531 MAX. |

Marking Code

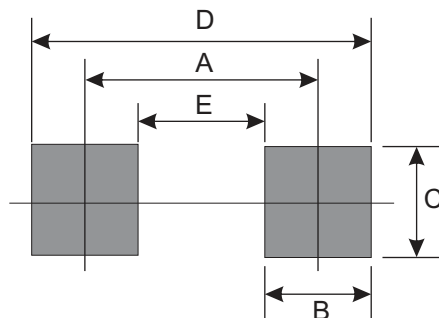
| Part Number | Marking Code | |
|-----------------|--------------|----|
| CDBURT0530LL-HF | BT | BS |



xx = 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 |