

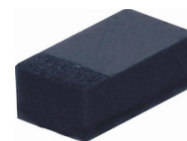
## CDBURT0230LL-HF

Forward Current = 200 mA

Reverse Voltage = 20 Volts

RoHS Device

Halogen Free

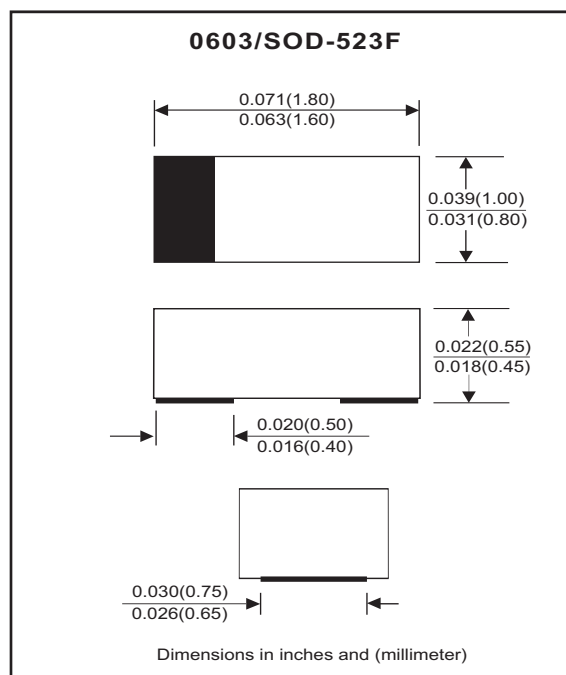


### Features

- 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.

### 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: 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 <sub>RRM</sub> |     |     | 30   | V    |
| Reverse voltage                 |                                                                     | V <sub>R</sub>   |     |     | 20   | V    |
| Average forward current         |                                                                     | I <sub>O</sub>   |     |     | 200  | mA   |
| Peak forward current            |                                                                     | I <sub>FM</sub>  |     |     | 500  | mA   |
| Forward current, surge peak     | 8.3ms single half sine-wave superimposed on rate load(JEDEC method) | I <sub>FSM</sub> |     |     | 1    | A    |
| Typical thermal resistance      |                                                                     | R <sub>θJA</sub> |     | 260 |      | °C/W |
| Junction temperature range      |                                                                     | T <sub>j</sub>   | -55 |     | +125 | °C   |
| Storage temperature range       |                                                                     | T <sub>STG</sub> | -55 |     | +125 | °C   |

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

| Parameter       | Conditions                   | Symbol         | Min | Typ | Max  | Unit |
|-----------------|------------------------------|----------------|-----|-----|------|------|
| Forward voltage | I <sub>F</sub> = 200 mA      | V <sub>F</sub> |     |     | 0.39 | V    |
| Reverse current | V <sub>R</sub> = 10 V        | I <sub>R</sub> |     |     | 30   | uA   |
| Capacitance     | V <sub>R</sub> = 1 V, f=1MHz | C              |     | 30  |      | pF   |

RATING AND CHARACTERISTIC CURVES (CDBURT0230LL-HF)

Fig.1 - Forward Current vs. Forward Voltage

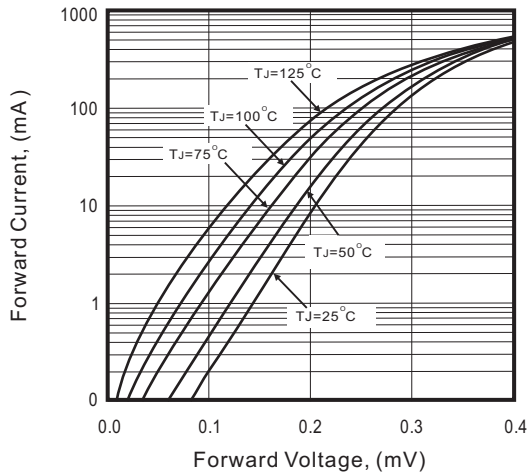


Fig.2 - Reverse Current vs. Reverse Voltage

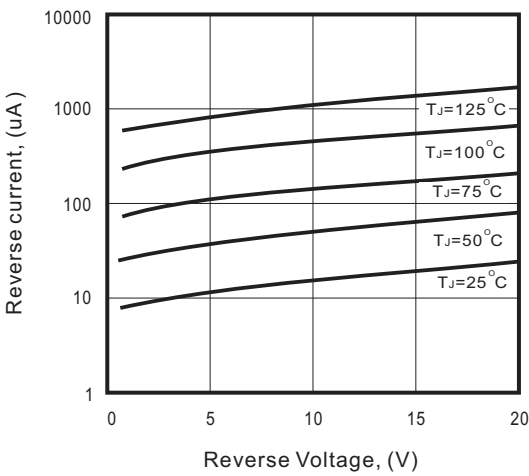


Fig.3 - Current Derating Curve

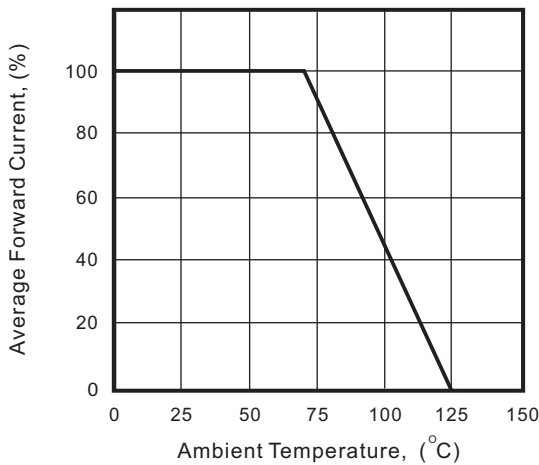
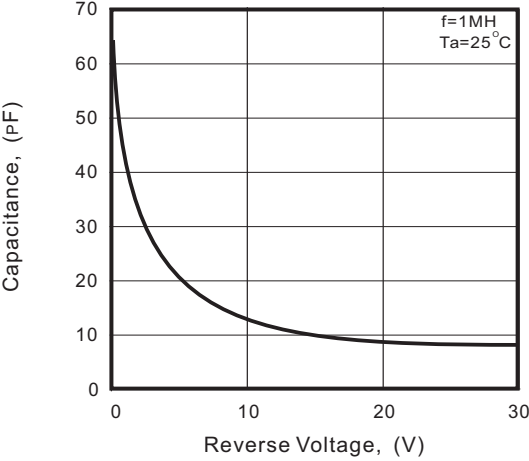
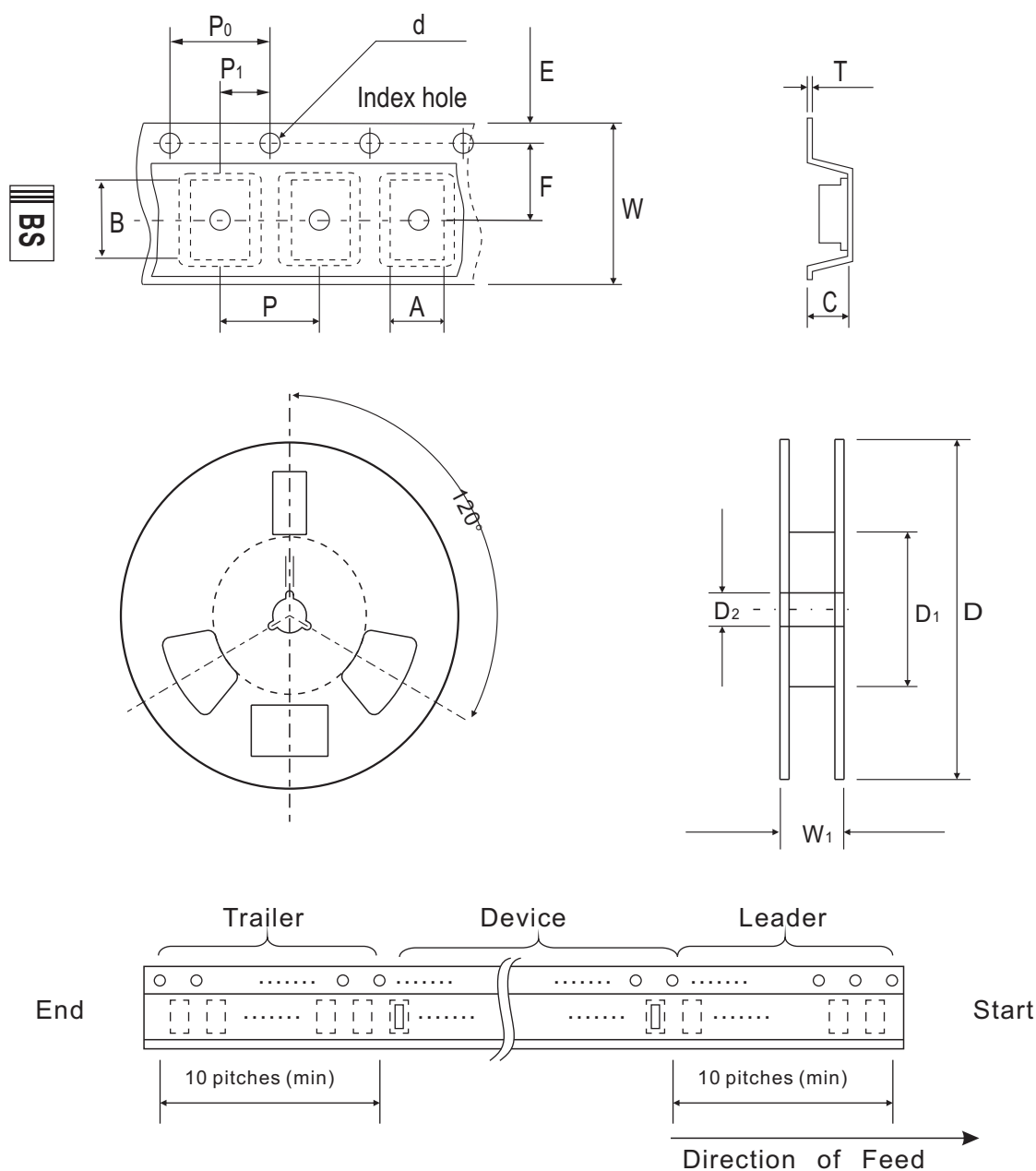


Fig.4 - Capacitance Between Terminals Characteristics



## Reel Taping Specification



| 0603<br>(SOD-523F) | SYMBOL | A             | B             | C             | d             | D            | D <sub>1</sub> | D <sub>2</sub> |
|--------------------|--------|---------------|---------------|---------------|---------------|--------------|----------------|----------------|
|                    | (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<br>(SOD-523F) | SYMBOL | E             | F             | P             | P <sub>0</sub> | P <sub>1</sub> | T             | W             | W <sub>1</sub> |
|--------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
|                    | (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.     |

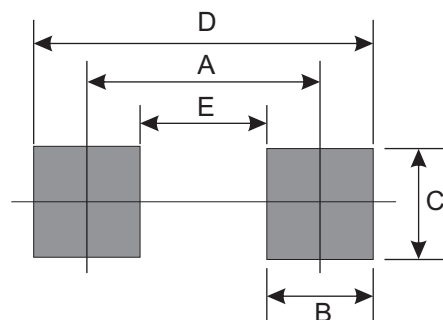
## Marking Code

| Part Number     | Marking Code |
|-----------------|--------------|
| CDBURT0230LL-HF | BS           |



## 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         |

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