

## CDBUC0530LL-HF

Forward Current = 500 mA  
Reverse Voltage = 20 Volts

RoHS Device  
Halogen Free



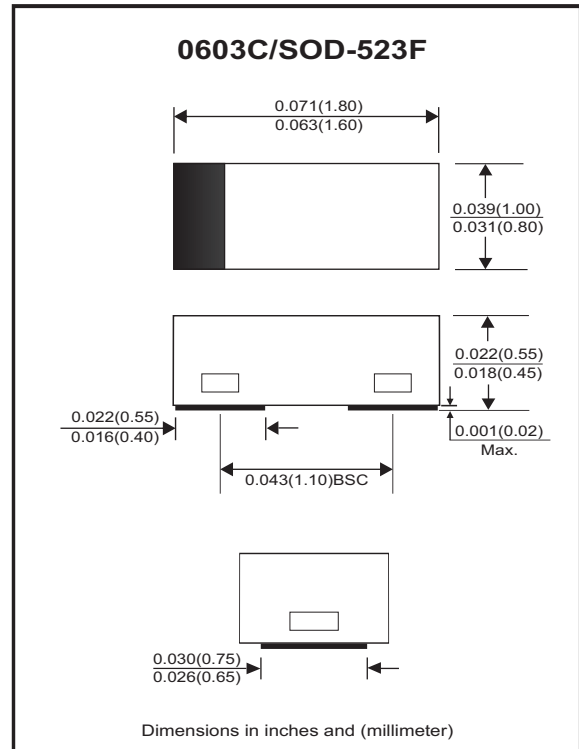
### Features

- Ultra low forward voltage.
- Designed for mounting on small surface.
- Extremely thin package.
- Majority carrier conduction.
- ESD Rating: -Human Body Model: Class 3B  
-Machine Model: Class C

### Mechanical data

- Case: 0603C/SOD-523F standard package, molded plastic.
- Terminals: Matte tin plated, solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting Position: Any
- Weight: 0.003 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>			500	mA
Peak forward surge current	8.3ms single half sine-wave superimposed on rate load(JEDEC method)	I <sub>FSM</sub>			5	A
Typical thermal resistance		R <sub>θJA</sub>		150		°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> = 100 mA I <sub>F</sub> = 500 mA	V <sub>F</sub>			0.32 0.46	V
Reverse current	V <sub>R</sub> = 20 V	I <sub>R</sub>		30	100	uA
Capacitance	V <sub>R</sub> = 1 V, f=1MHz	C		30		pF

## RATING AND CHARACTERISTIC CURVES (CDBUC0530LL-HF)

Fig.1 - Forward Current vs. Forward Voltage

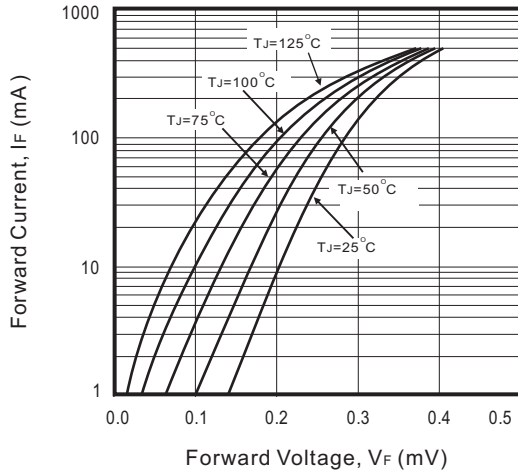


Fig.2 - Reverse Current vs. Reverse Voltage

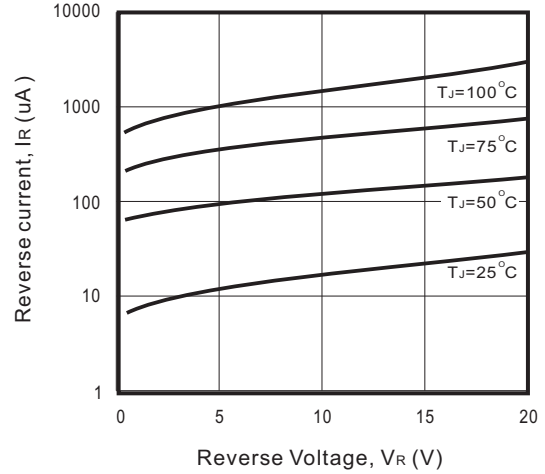


Fig.3 - Current Derating Curve

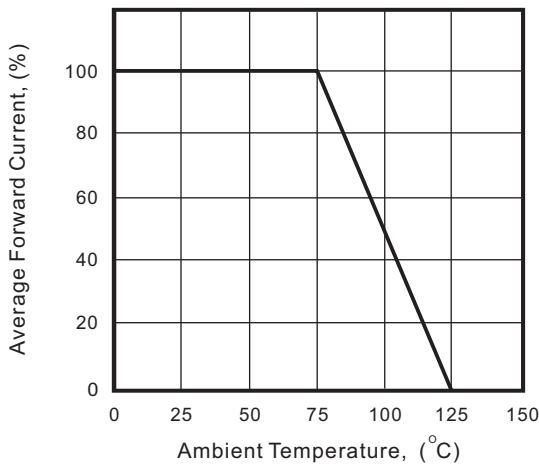
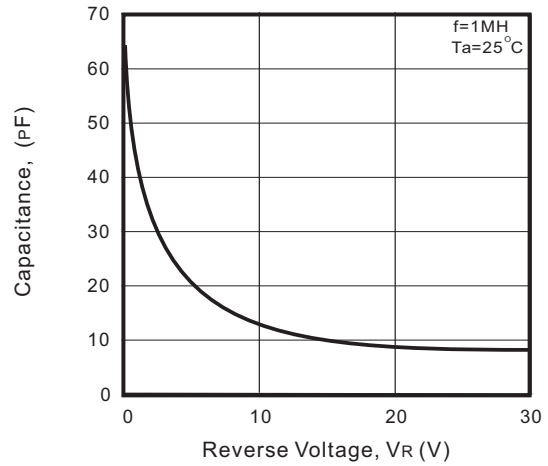
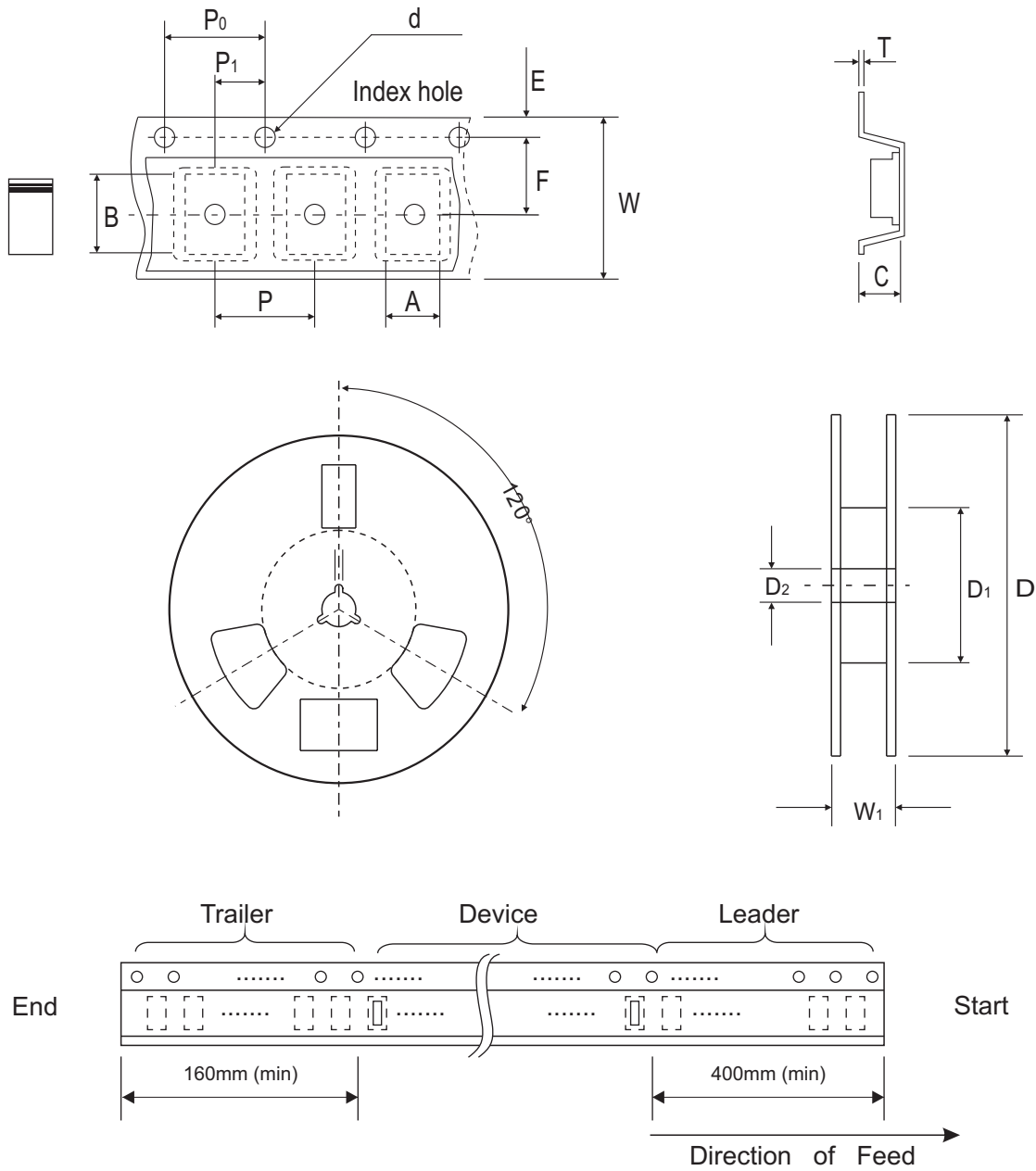


Fig.4 - Capacitance Between Terminals Characteristics



## Reel Taping Specification



0603C/ 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 <sup>+0.10</sup> <sub>-0</sub>	178.00 ± 1.00	60.00 ± 0.50	13.50 ± 0.20
	(inch)	0.041 ± 0.002	0.077 ± 0.002	0.022 ± 0.002	0.059 <sup>+0.004</sup> <sub>-0</sub>	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

0603C/ 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	12.00 <sup>+0.50</sup> <sub>-0</sub>
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.002	0.079 ± 0.002	0.008 ± 0.001	0.315 ± 0.008	0.472 <sup>+0.020</sup> <sub>-0</sub>

## Marking Code

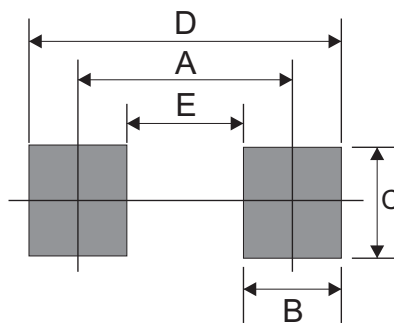
Part Number	Marking Code	
CDBUC0530LL-HF	BT	BS



xx = Product type marking code

## Suggested PAD Layout

SIZE	0603C/SOD-523F	
	(mm)	(inch)
A	1.10	0.043
B	0.60	0.024
C	0.80	0.031
D	1.70	0.067
E	0.50	0.020



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
0603C/SOD-523F	4,000	7