

CDBUC0530LL-HF

High-Reliability and High-Performance

Forward Current = 500 mA

Reverse Voltage = 20 Volts

RoHS Device

Halogen Free



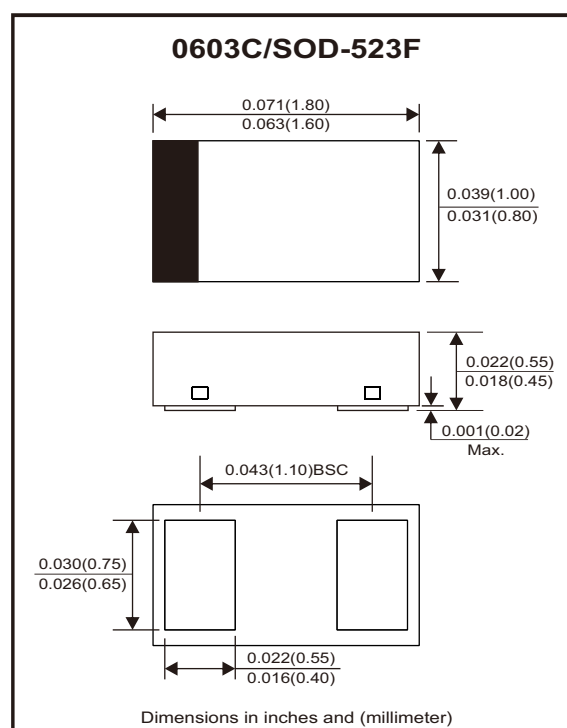
Features

- 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 $T_A=25^\circ\text{C}$ 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
Peak forward surge current	8.3ms single half sine-wave superimposed on rate load(JEDEC method)	I_{FSM}			5	A
Typical thermal resistance		$R_{\theta JA}$		150		$^\circ\text{C/W}$
Junction temperature range		T_j	-55		+125	$^\circ\text{C}$
Storage temperature range		T_{STG}	-55		+125	$^\circ\text{C}$

Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 100\text{ mA}$ $I_F = 500\text{ mA}$	V_F			0.32 0.46	V
Reverse current	$V_R = 20\text{ V}$	I_R		30	100	μA
Capacitance	$V_R = 1\text{ V}$, $f=1\text{ MHz}$	C		30		pF

Rating and Characteristic Curves (CDBUC0530LL-HF)

Fig.1 - Forward Current vs. Forward Voltage

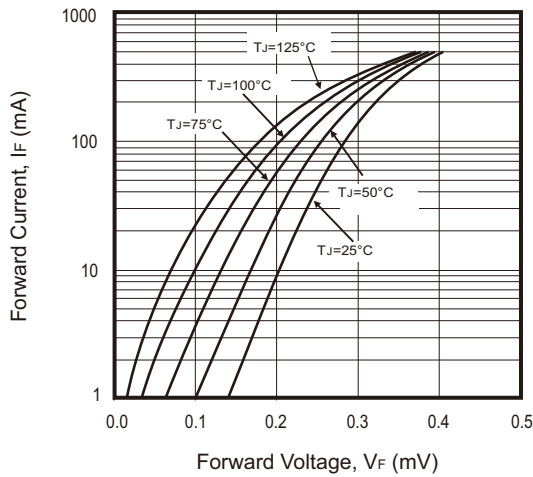


Fig.2 - Reverse Current vs. Reverse Voltage

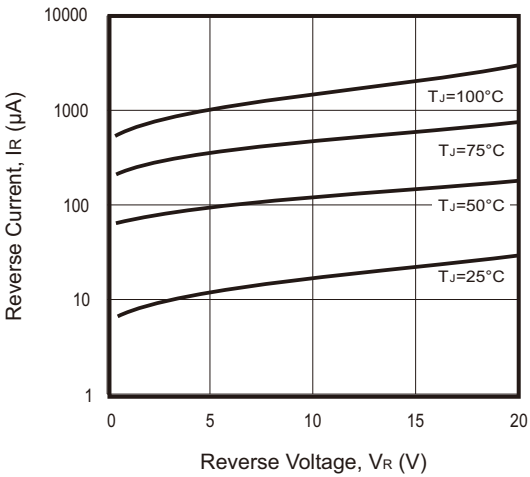


Fig.3 - Current Derating Curve

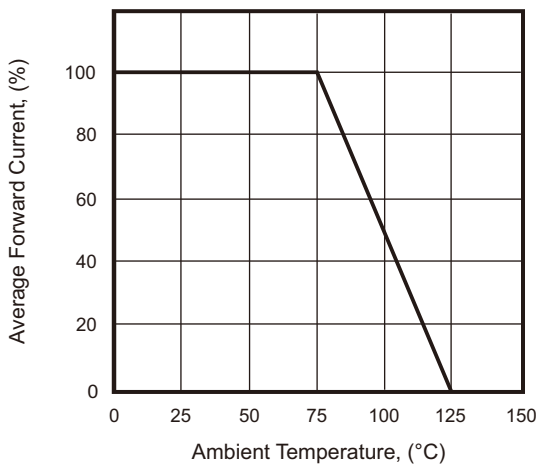
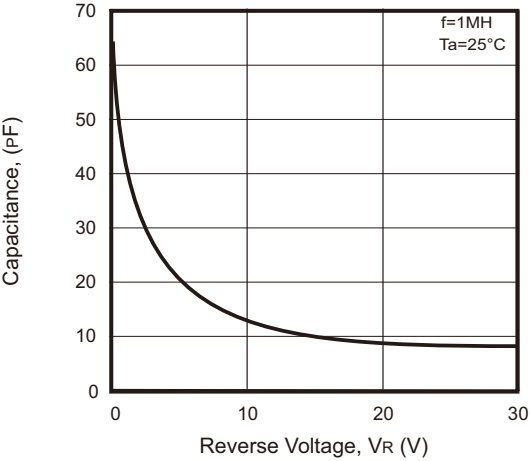
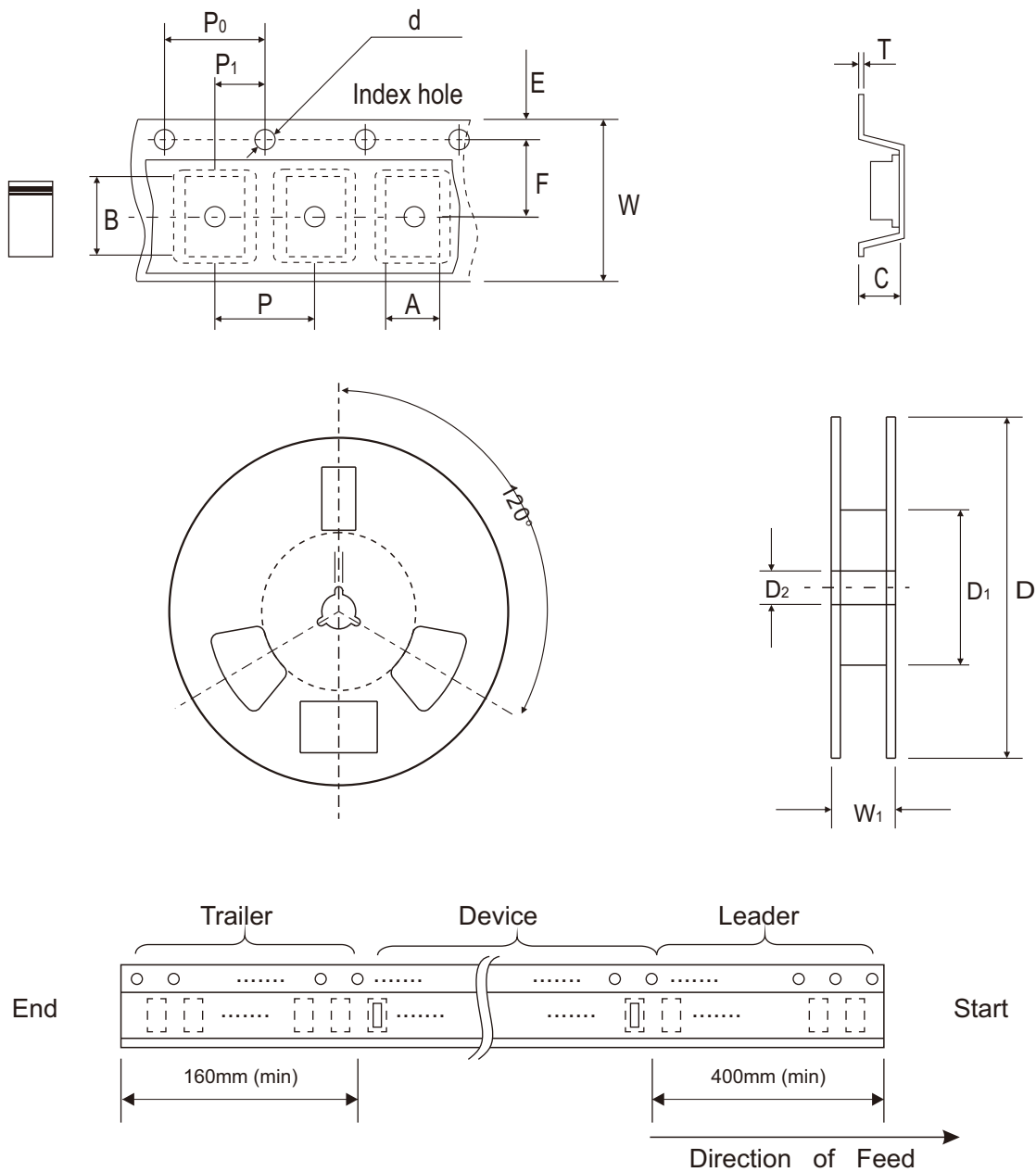


Fig.4 - Capacitance Between Terminals Characteristics



Reel Taping Specification



0603C/ SOD-523F	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	1.05 ± 0.05	1.96 ± 0.05	0.57 ± 0.05	1.50 + 0.10 - 0	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 + 0.004 - 0	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

0603C/ 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	12.00 + 0.50 - 0
	(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 + 0.020 - 0

Marking Code

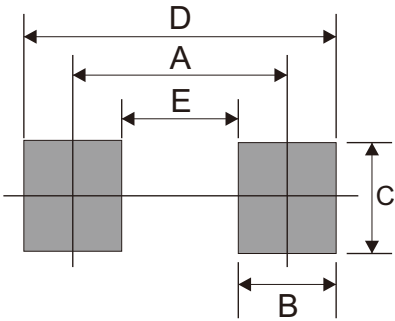
Part Number	Marking Code	
CDBUC0530LL-HF	BT	BS



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