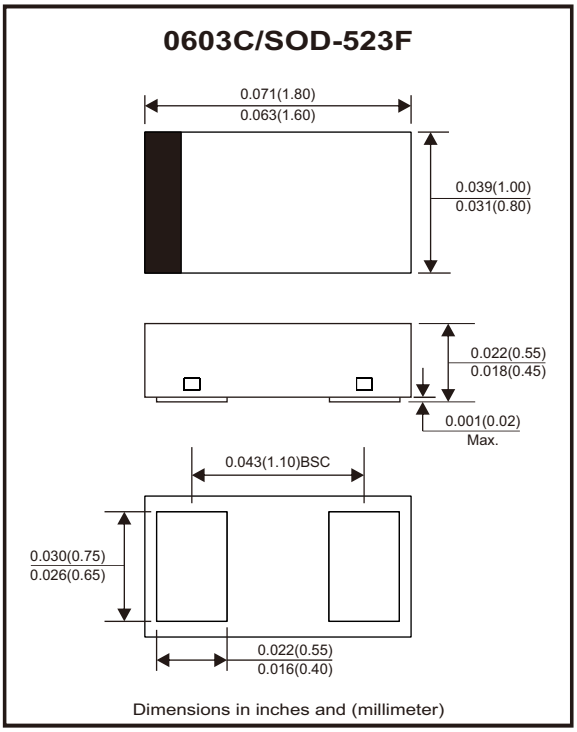
CDBUC40-HF

High-Reliability and High-Performance
Io = 200 mA
V_R = 40 V
RoHS Device
Halogen Free





Features

- Low reverse current.
- Designed for mounting on small surface.
- Extremely thin / leadless package.
- Majority carrier conduction.

Mechanical data

- Case: 0603C/SOD-523F standard package, molded plastic.
- Terminals: Gold 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°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Peak reverse voltage		V_{RM}			40	V
Reverse voltage		V_R			40	V
RMS reverse voltage		$V_{R(RMS)}$			28	V
Average forward rectified current		I_O			200	mA
Peak forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}			0.6	A
Power dissipation		P_D			150	mW
Operating temperature range		T_j	-65		+125	°C
Storage temperature range		T_{STG}	-65		+125	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	I_F = 1mA I_F = 40mA	V_F			0.38 1	V
Reverse current	V_R = 30V	I_R			0.2	μA
Capacitance between terminals	f = 1MHz, and 0 VDC reverse voltage	C_T			5	pF
Reverse recovery time	I_F = I_R = 10mA, Irr = 0.1 x I_R, R_L = 100 ohm	T_{rr}			5	nS

Typical Rating and Characteristic Curves (CDBUC40-HF)

Fig.1 - Forward Characteristics

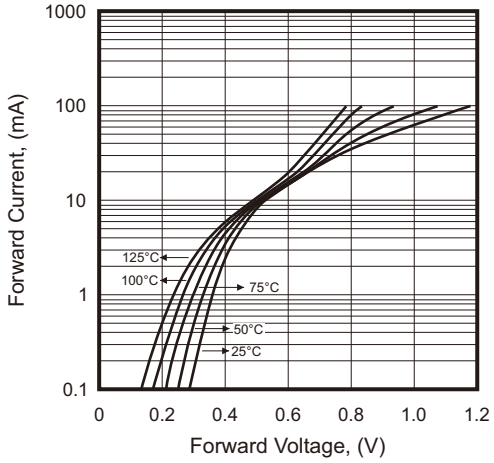


Fig.2 - Reverse Characteristics

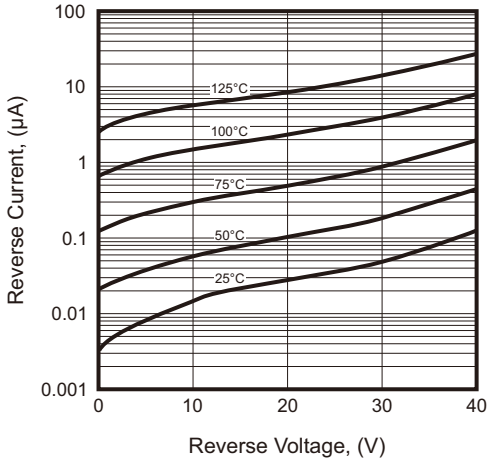


Fig.3 - Capacitance Between Terminals Characteristics

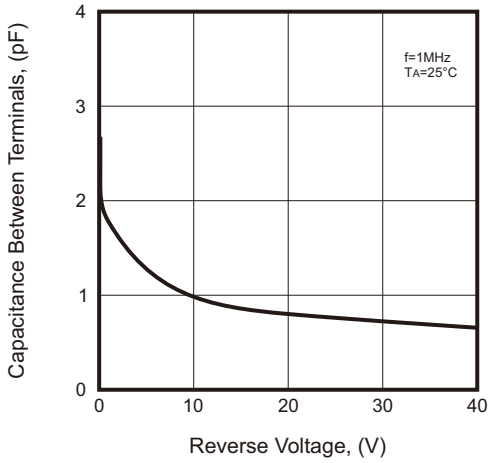
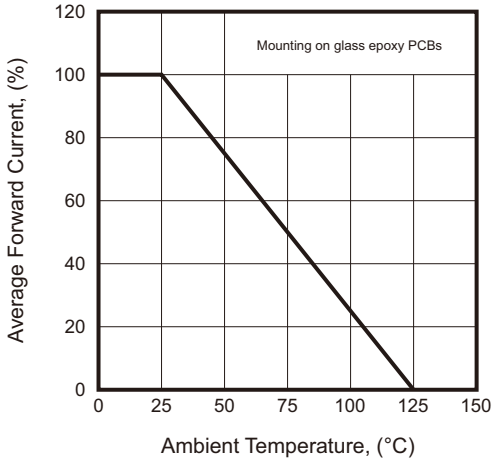
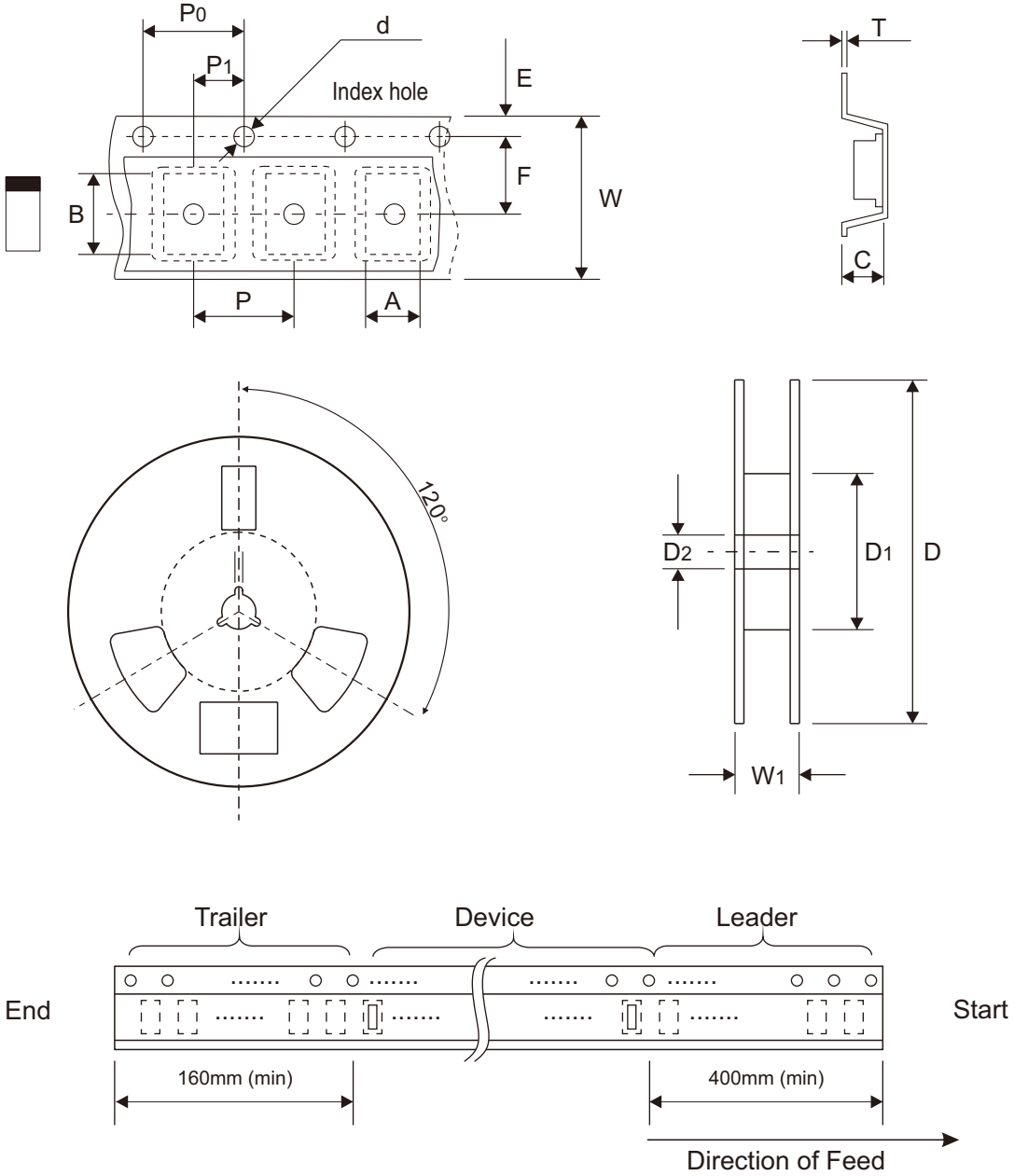


Fig.4 - Current Derating Curve



Reel Taping Specification



	SYMBOL	A	B	C	d	D	D1	D2
0603C (SOD-523F)	(mm)	1.05 ± 0.05	1.96 ± 0.05	0.57 ± 0.05	1.50 + 0.10 − 0.00	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 − 0.000	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

	SYMBOL	E	F	P	P0	P1	T	W	W1
0603C (SOD-523F)	(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 − 0.00
	(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 − 0.000

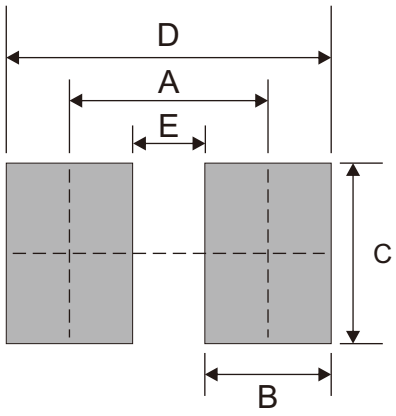
Marking Code

Part Number	Marking Code
CDBUC40-HF	BC



Suggested P.C.B. PAD Layout

SIZE	0603C/SOD-523F	
	(mm)	(inch)
A	1.10	0.043
B	0.70	0.028
C	1.00	0.039
D	1.80	0.071
E	0.40	0.016



Standard Packaging

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