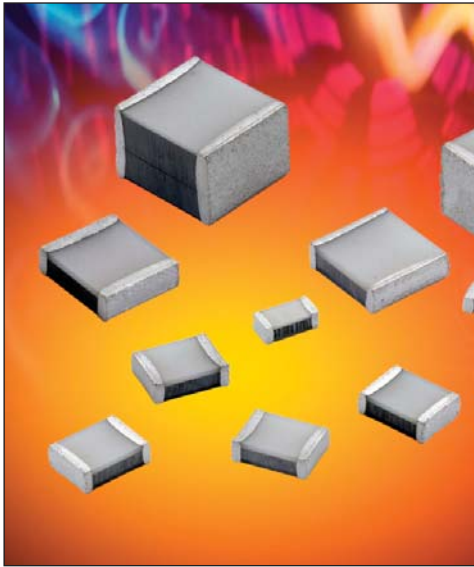
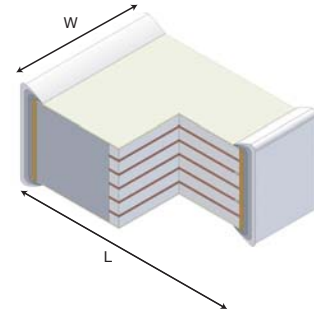
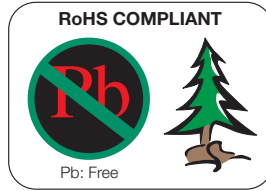


Film Chip Capacitors Lead Free Version

PEN Dielectric – CB Series



NEW



CASE DIMENSIONS: millimeters (inches)

Size Code	Equivalent size	Length (L)	Width (W)
01	1206	3.2±0.30 (0.126±0.012)	1.6±0.30 (0.063±0.012)
02	1210	3.2±0.30 (0.126±0.012)	2.5±0.30 (0.098±0.012)
03	1812	4.5±0.50 (0.177±0.02)	3.2±0.50 (0.126±0.02)
04	2220	5.7±0.50 (0.224±0.02)	5.0±0.50 (0.197±0.02)
05	2824	7.1±0.50 (0.28±0.02)	6.1±0.50 (0.24±0.02)

HOW TO ORDER

CB	05	7	D	0105	K	--
Type	Size	Dielectric	Voltage	Capacitance	Tolerance EIA Code	Suffix Packaging
CB: SMD Lead Free	01: 1206 02: 1210 03: 1812 04: 2220 05: 2824	7 = PEN	C = 25V D = 50/63V E = 100V G = 250V I = 400V	1st digit: 0 2nd & 3rd: the 2nd significant figures of the capacitance value. 4th digit: the number of zeros to be added to the capacitance value.	J = 5% K = 10%	-- = bulk BA = tape & reel diameter: 180mm BC = tape & reel diameter: 330mm

Example of an order: How to order a chip film PEN 1µF ±10% 63V bulk packaging.



Film Chip Capacitors Lead Free Version

PEN Dielectric – CB Series



NEW



PERFORMANCE CHARACTERISTICS

Climatic Category	55/125/56
Capacitance Range	1nF to 1.5μF
Tolerance on C_r	±5%, ±10%
Nominal Voltages	25Vdc to 400Vdc
Test Voltage	1.4Vr 2s to 25°C
Soldering Methods	IR or vapor phase reflow (not suitable for wave soldering)
Tangent of Loss Angle : D.F.	< 100 x 10 ⁻⁴
Insulation Resistance minimum : IR	
for C ≤ 0.33μF	IR > 1000 MΩ at 20°C for 1 min. charge at 10VDC for VR < 100VDC and 100VDC for VR ≥ 100V
for C > 0.33μF	IR.C > 400sec. at 20°C for 1 min. charge at 10VDC for VR < 100VDC and 100VDC for VR ≥ 100V
Temperature Range	-55°C to +125°C

CAPACITANCE VALUES AND NOMINAL VOLTAGE vs SIZE

PEN Version												
Capacitance Range (CR)	VOLTAGE 25V		VOLTAGE 50V		VOLTAGE 100V		VOLTAGE 250V		VOLTAGE 400V		VOLTAGE 630V	
	Ordering code	Size	Ordering code	Size	Ordering code	Size	Ordering code	Size	Ordering code	Size	Ordering code	Size
1000pF	CB017C0102+--	1206	CB017D0102+--	1206	CB017E0102+--	1206	CB037G0102+--	1812	CB037I0102+--	1812	Development Range	
2200	CB017C0222+--	1206	CB017D0222+--	1206	CB017E0222+--	1206	CB037G0222+--	1812	CB037I0222+--	1812		
4700	CB017C0472+--	1206	CB017D0472+--	1206	CB017E0472+--	1206	CB037G0472+--	1812	CB037I0472+--	1812		
6800	CB017C0682+--	1206	CB017D0682+--	1206	CB017E0682+--	1206	CB037G0682+--	1812	CB037I0682+--	1812		
10nF	CB017C0103+--	1206	CB017D0103+--	1206	CB017E0103+--	1206	CB037G0103+--	1812	CB047I0103+--	2220		
15	CB017C0153+--	1206	CB017D0153+--	1206	CB027E0153+--	1210	CB037G0153+--	1812	CB047I0153+--	2220		
22	CB017C0223+--	1206	CB017D0223+--	1206	CB027E0223+--	1210	CB037G0223+--	1812	CB047I0223+--	2220		
33	CB027C0333+--	1210	CB027D0333+--	1210	CB037E0333+--	1812	CB047G0333+--	2220	CB057I0333+--	2824		
47	CB027C0473+--	1210	CB027D0473+--	1210	CB037E0473+--	1812	CB047G0473+--	2220	CB057I0473+--	2824		
68	CB027C0683+--	1210	CB027D0683+--	1210	CB037E0683+--	1812	CB047G0683+--	2220	Development Range			
100nF	CB027C0104+--	1210	CB027D0104+--	1210	CB037E0104+--	1812	CB047G0104+--	2220				
150			CB037D0154+--	1812	CB047E0154+--	2220	CB057G0154+--	2824				
220			CB037D0224+--	1812	CB047E0224+--	2220	CB057G0224+--	2824				
330			CB047D0334+--	2220	CB047E0334+--	2220						
470			CB047D0474+--	2220	CB057E0474+--	2824						
680			CB047D0684+--	2220	CB057E0684+--	2824						
1μF			CB057D0105+--	2824								
1.5			CB057D0155+--	2824								

Replace the + by the tolerance code : J=5% or K=10%
 Replace the - - by the packaging suffix: - - = bulk
 BA or BC = tape & reel

MOUNTING AND SOLDERING

- * Reflow soldering referring to Jecdec Standard with some limitations
- * Profile limits : 1206 to 1812 60s at temperature > 217°C
 T max= 250°C and 10 s between T max and Tmax-5°C
- 2220 to 2824 75s at temperature > 217°C
 T max= 255°C and 10 s between T max and Tmax-5°C
- * JEDEC J-Std 020C

