

C O N T E N T S

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DIL

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SML

Surface Mount Leadframes
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SMC

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SMC Design & Series Codes



Quality Policy Statement

Batten and Allen Ltd is a designer / manufacturer and electroplater of precision stampings, with over forty years experience. We provide parts for electronics, medical, automotive, telecommunications and solar applications from our base in Cirencester UK. We supply hundreds of millions of components worldwide each month.

It is our policy to improve the performance of our Management System through a continuous programme of data collection, analysis and action. The purpose of our Management System is to satisfy or exceed customer expectations; helping us to maintain or improve the high standard of products and services that we provide. In addition to improving our performance we will reduce our environmental impact by complying with relevant environmental legislation and through progress towards our targets and objectives.

We are also committed to continual improvement, prevention of pollution and reducing risks associated with emergency situations (such as fire, flood and chemical release). To this end we will appraise our performance during management review, and also review our targets and objectives to ensure that they remain appropriate.

This policy will be communicated to all company employees and subcontractors and is available to all interested parties, including the public, on request, or by visiting our company web site (www.batten-allen.com).

Alan Batten
Chairman



Pre Plating Specification

Type of plating: Hot Tin Dip

Plating Code: **1A** = 100% Sn



Thickness: 3 to 7 Microns

Shelf life: 1 Year from date of despatch:
Depending on storage conditions

Finish: Bright

Melting Point: 232°C (Approx)

Ageing test: Test to be performed in accordance with BS 2011
Test "Ta"

Method 1 (Solder Bath Method)

- 1) Accelerated ageing for 16 hours @ 155°C
- 2) Immersion in SM/NA flux for 5 seconds
- 3) Immersion in solder at 250°C ±5°C for 5 seconds, No Dewetting Permissible

Additional test on request:-

Hot Plate test:

Place material on Hot Plate at 325°C minimum for
Both sides of material to be inspected,
Top side to be considered as test side.
No Dewetting Permissible.
Pin holes acceptable (Areas less than 0.125mm)
Maximum of 20 per 50mm² area



Post Plating Specification

Type of plating: Electroplated

Plating Code: 4 to 8 Microns Pure Tin, Matt Finish (Non Reflow)

4A Pure Tin

4B Nickel flash under Pure Tin

4C 0.25 Micron Min Nickel under Pure Tin



The Nickel Flash is believed to reduce the risk of Tin whiskers forming, but can cause the tin to discolour during the reflow process. The discolouration does not affect the solderability.

The advantage of post plating over pre plating is that there are no bare edges and therefore a better solder joint should be achieved.

Other plating specifications on request include 4 to 8 Microns 60/40 Tin/Lead for RoHS exempt products designation "2A"

Shelf Life: 1 Year from date of despatch:

Depending on storage conditions

Melting Point: Pure Sn 231.9°C

Ageing test: Test to be performed in accordance with BS 2011: Part 2.1T:1981 Method 1, ageing 3.

1) Accelerated ageing for 16 hours @ 155°C

2) Immersion in non-activated flux for 5 seconds

3) Immersion in solder at 235°C ±5°C for 5 seconds

The dipped surface shall be covered with a smooth bright solder coating with no more than small amounts of scattered imperfections such as pin holes and dewetting. Within the significant surface these imperfections shall not exceed 5% of the area.



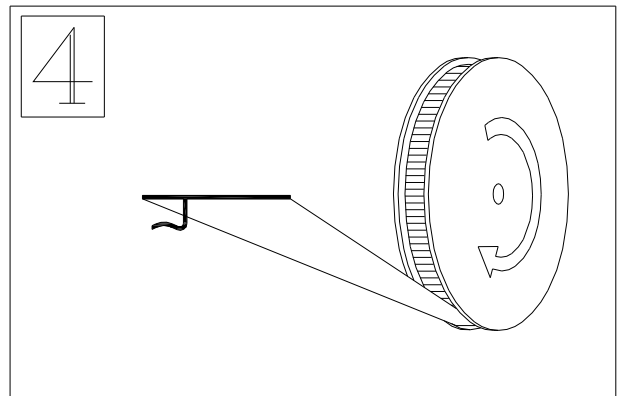
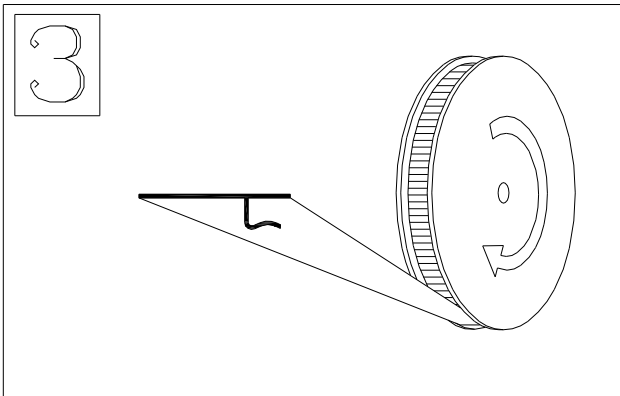
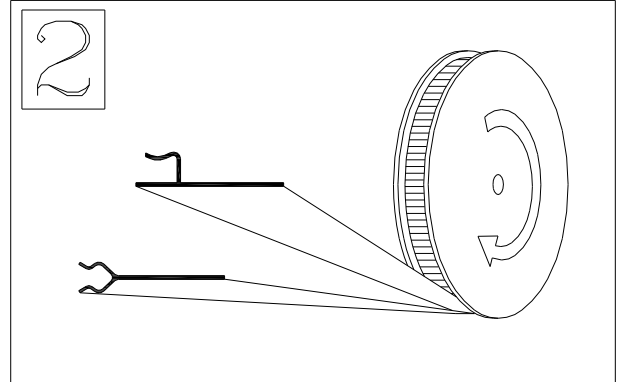
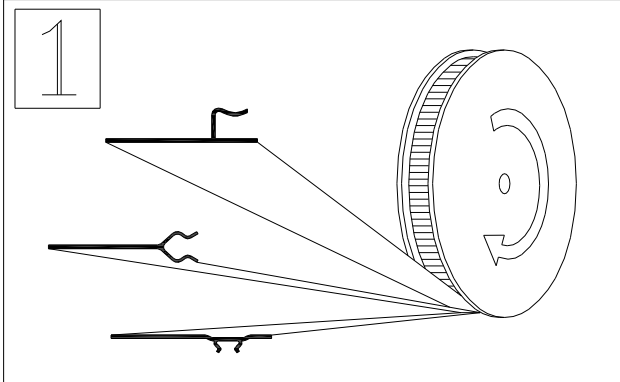
Base Material Specification

Material Designation	Alloy: Copper Tin (Phosphor Bronze)	
	DIN	CuSn6
	Designation	2.1020
	UNS	C51900
	BS	PB103
	NF	CuSn6P
Composition (nominal)	Weight Percentage	Cu 94 Sn 6
Physical Properties (nominal)	Electric	m/Ωmm ²
	Conductivity	% IACS
	Thermal	W/m K
	Conductivity	75
	Coefficient of	10 ⁻⁶ /K
	Thermo Expansion	18.5
Elastic	KN/mm ²	
Modulus	118	
Density	g/cm ³	8.8

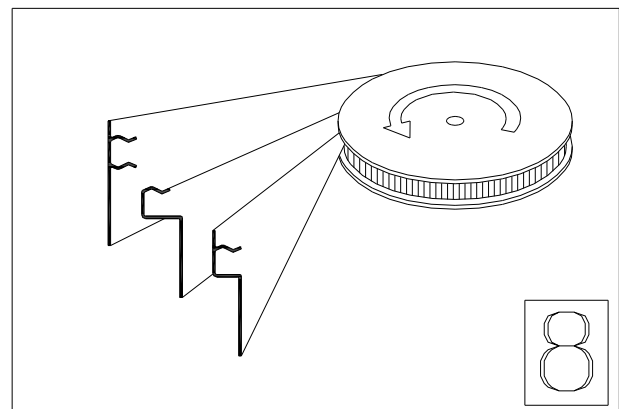
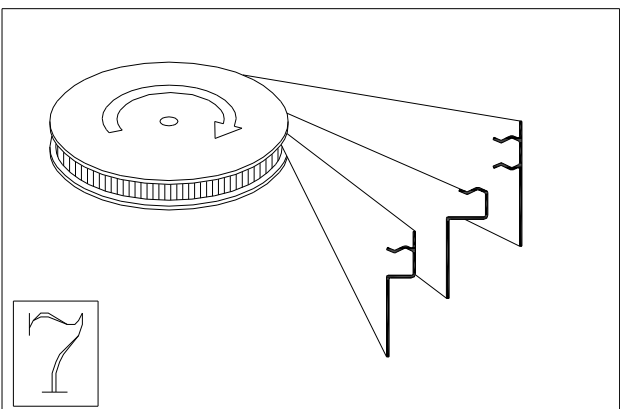
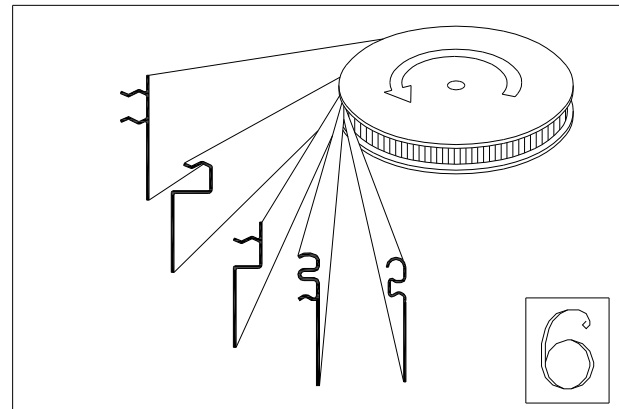
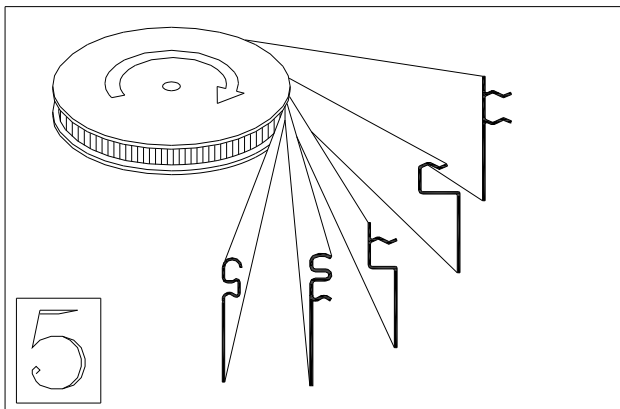


Winding Styles

Single In Line Winding Styles



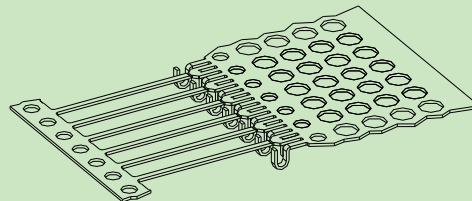
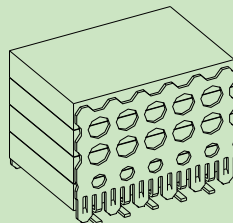
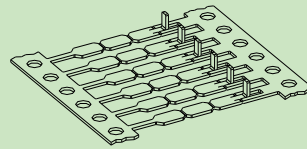
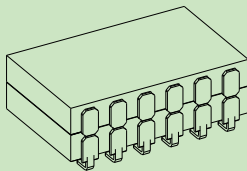
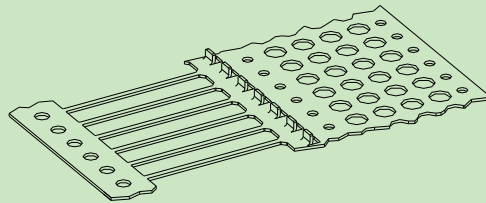
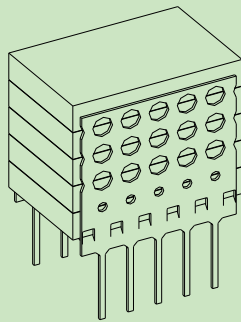
Dual In Line Winding Styles





BATTEN & ALLEN LIMITED

Ceramic Capacitor Leadframes



Clip Design & Series Numbers

CERAMIC CAPACITOR LEADFRAMES



**EXAMPLE OF POSSIBLE
ORDER CODE**

CC11016-4A-F5

Part Number Series	Out-Line	Stand off length	Leg Type	Tab	No of Holes	Plating Spec'	Quantity Per Reel	Wind Style
CC	1	1	0	1	6	4A	F	5 to 8

Series & Part Number

Stand Off

Leg Type

Tab Type

Number of Holes

Plating Specification

Quantity Per Reel

Winding Style

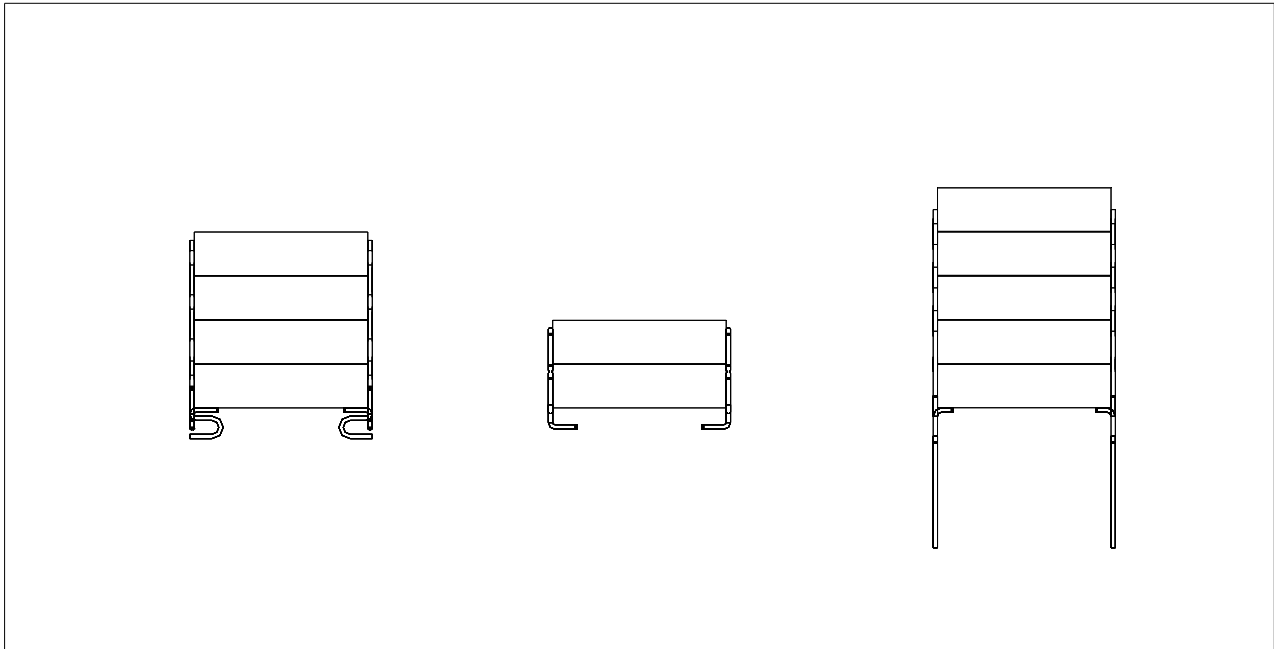
THE PATTERNS ILLUSTRATED IN THIS CATALOGUE ARE OPEN TOOLED AND MANY ARE AVAILABLE FROM STOCK, UNLESS NOTED AT THE BOTTOM OF EACH PAGE, THEN A MINIMUM ORDER QUANTITY APPLIES. PLEASE EMAIL, FAX OR TELEPHONE TO CONFIRM PRICE AND AVAILABILITY. IF YOUR REQUIREMENT IS NON-STANDARD, PLEASE DO NOT HESITATE TO CONTACT OUR SALES TEAM .

Keith Hanning
Sales Manager

Steve Mitchell
Sales Engineer



CCL Design And Series Numbers



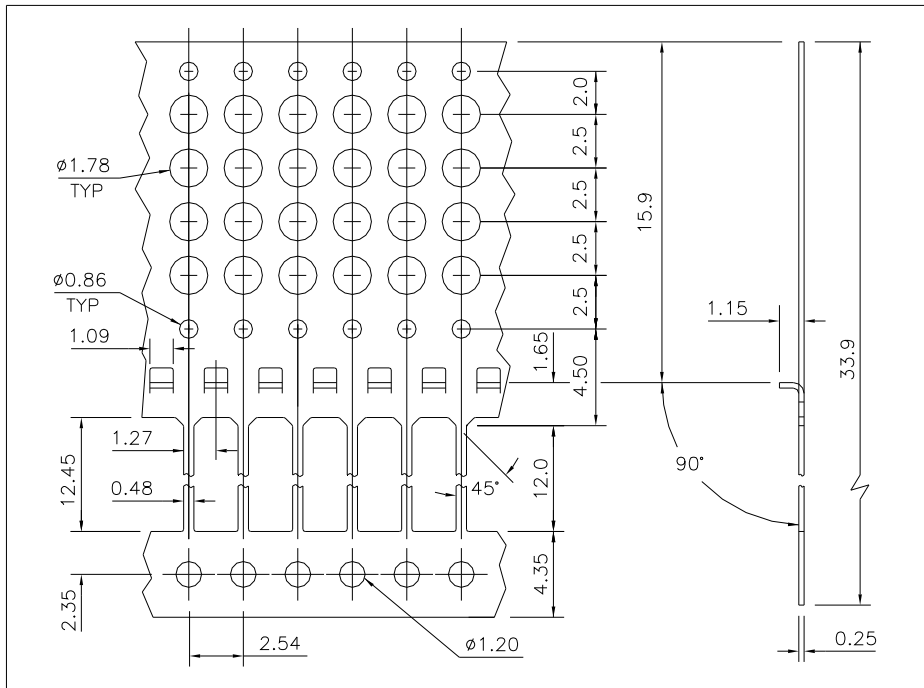
Series	Pitch	Strip Width	Stand off	Material Thickness	Page
CC11016	2.54mm	33.9mm	1.65mm	0.25mm	79
CC22100	2.54mm	18.1mm	8.45mm	0.25mm	80
CC33100	2.54mm	31.75mm	1.20mm	0.25mm	81
CC34300	2.54mm	31.75mm	1.78mm	0.25mm	82



BATTEN & ALLEN

PROGRESSION IN STAMPING

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 sales@batten-allen.co.uk
www.batten-allen.com



CCL
CC1000
 SERIES
 SHEET 1 OF 1

Pitch
 2.54 mm
 0.100 inch

Strip Width
 33.9 mm
 1.335 inch

Material Thickness
 0.25mm
 0.010 inch

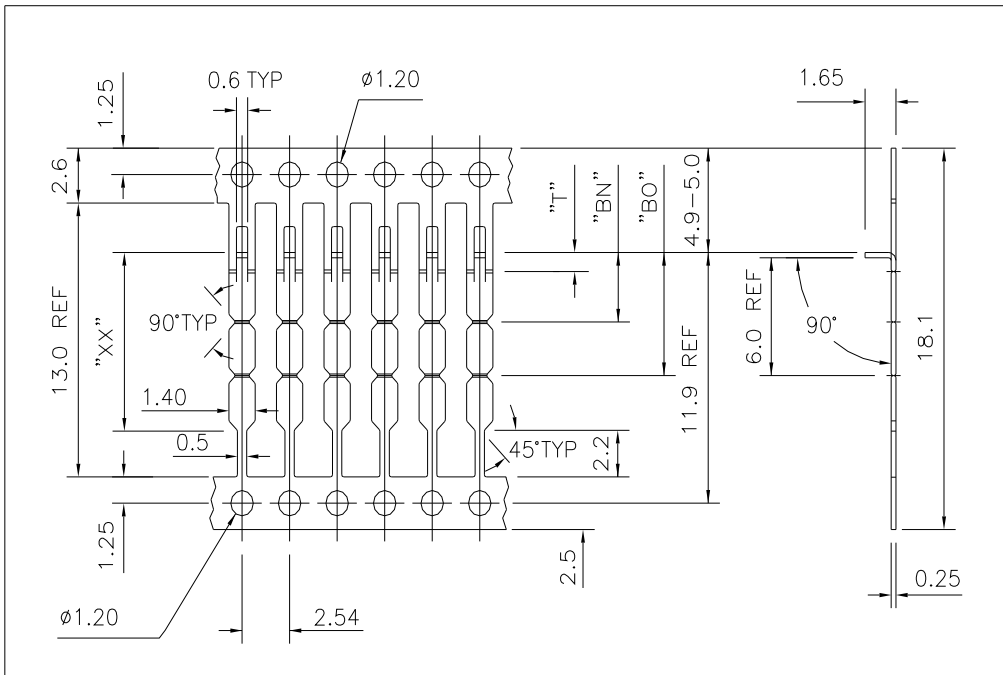
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		Stand Off *XX*	Pin Length *XXX*		Part Number	Tab Type	Number Of Holes	Plating Code	Quantity Per Reel	Wind Style
		1.65mm 0.065"	12.00mm 0.472"		CC110	0 1	1 to 6	4A	E (40K)	5 to 8

*Shaded Part Numbers are subject to Minimum Order Quantities of 480,000

EXAMPLE OF POSSIBLE ORDER CODE

Other plating styles on request

Part Number	Tab Type	Number Of Holes	Plating Code	Quantity Per Reel	Wind Style
CC110	1	6	4A	E	5



CCL
CC22100
SERIES
SHEET 1 OF 1

Pitch
2.54 mm
0.100 inch

Strip Width
18.1mm
0.713 inch

Material Thickness
0.25mm
0.010 inch

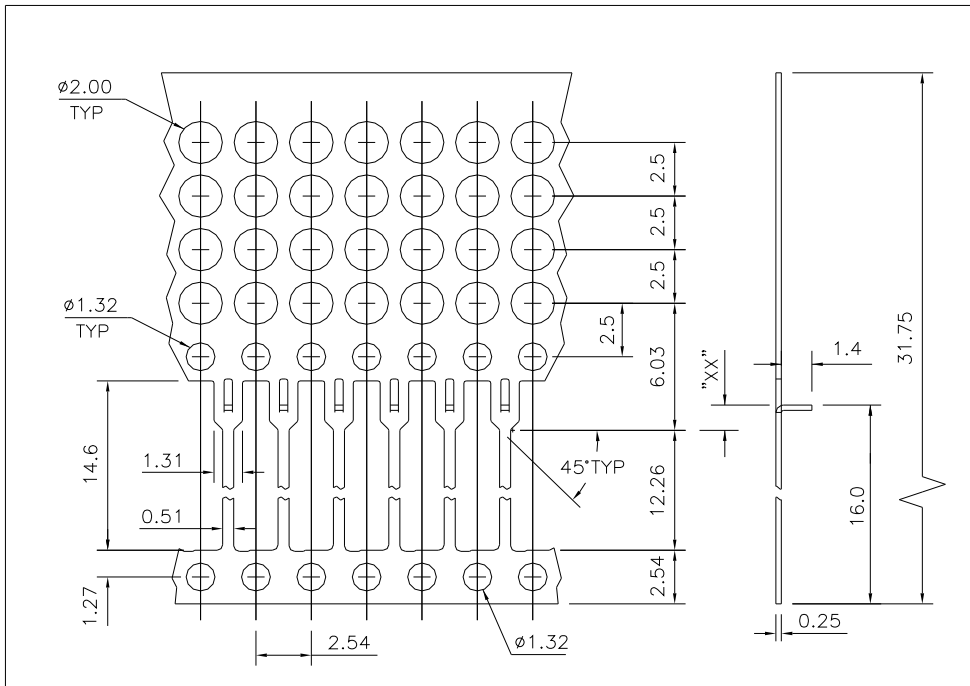
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		Stand Off *XX*	Pin Length *XXX*		Part Number	Top Bar *T*	Bottom Bar *B*	Plating Code	Quantity Per Reel	Wind Style
		8.45mm 0.333"	2.20mm 0.087"		CC22100	UC	BN BO BZ	4A	F (50K)	5 to 8

*Shaded Part Numbers are subject to Minimum Order Quantities of 480,000

EXAMPLE OF POSSIBLE ORDER CODE

Other plating styles on request

Part Number	Top Bar *T*	Bottom Bar *B*	Plating Code	Quantity Per Reel	Wind Style
CC22100	UC	BN	4A	F	5



CCL
CC33100
SERIES
SHEET 1 OF 1

Pitch
2.54 mm
0.100 inch

Strip Width
31.75 mm
1.250 inch

Material Thickness
0.25mm
0.010 inch

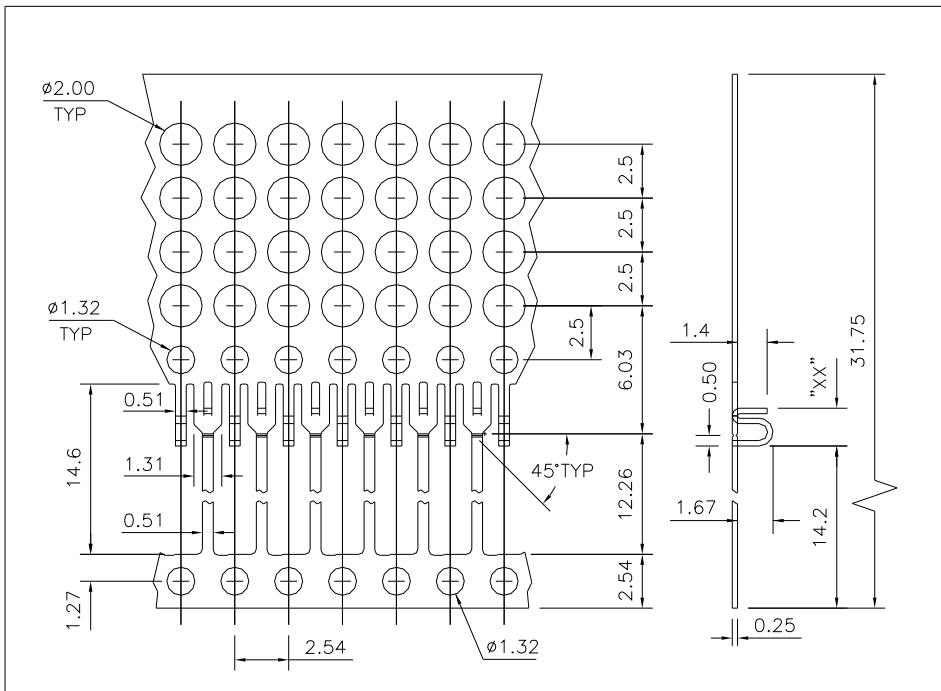
Technical Information				Ordering Information					
		Stand Off *XX*	Pin Length *XXX*	Part Number	Tab Type	Number Of Holes	Plating Code	Quantity Per Reel	Wind Style
		1.20mm 0.047"	12.26mm 0.483"	CC331	0 1	1 to 5	4A	E (40K)	5 to 8

*Shaded Part Numbers are subject to Minimum Order Quantities of 480,000

EXAMPLE OF POSSIBLE ORDER CODE

Other plating styles on request

Part Number	Tab Type	Number Of Holes	Plating Code	Quantity Per Reel	Wind Style
CC331	1	5	4A	E	5



CCL
CC34300
SERIES
SHEET 1 OF 1

Pitch
2.54 mm
0.100 inch

Strip Width
31.75 mm
1.250 inch

Material Thickness
0.25mm
0.010 inch

Technical Information				Ordering Information						
		Stand Off *XX*	Pin Length *XXX*		Part Number	Tab Type	Number Of Holes	Plating Code	Quantity Per Reel	Wind Style
		1.78mm 0.070"	12.26mm 0.483"		CC343	0 1	1 to 5	4A	E (40K)	5 to 8

*Shaded Part Numbers are subject to Minimum Order Quantities of 500,000

EXAMPLE OF POSSIBLE ORDER CODE

Other plating styles on request

Part Number	Tab Type	Number Of Holes	Plating Code	Quantity Per Reel	Wind Style
CC343	1	5	4A	E	5



BATTEN & ALLEN LIMITED

Assembly Systems

Single in Line
&
Dual in Line

Please Contact
Batten & Allen Ltd
For details of a range of
Assembly Systems from Hand
Operated to Fully Automatic.