

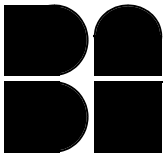
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SML

Surface Mount Leadframes
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BATTEN & ALLEN LIMITED

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Quality Policy Statement

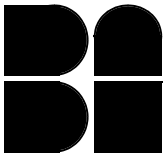
Batten and Allen Ltd is a designer / manufacturer and electroplater of precision stampings, with over thirty years experience. We provide parts for electronics, medical, automotive, telecommunications and solar applications from our base in Cirencester UK. We supply hundreds of millions of components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



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SM6700-UBBF-A1-4A-G1

**EXAMPLE OF POSSIBLE
ORDER CODE**

Part Number	Top Bar *T*	Bottom Bar *B*	On Lay Style	Plating Code	Quantity Per Reel	Wind Style
SM6700	UB	BF	A1	4A	G	1

Series & Part Number

Top Bar Break

Bottom Bar Break Off

On Lay Style

Plating Specification

Quantity Per Reel

Winding Style

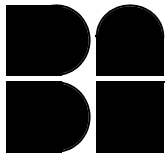
THE PATTERNS ILLUSTRATED IN THIS CATALOGUE ARE OPEN TOOLED AND MANY ARE AVAILABLE FROM STOCK, UNLESS NOTED AT THE BOTTOM OF EACH PAGE, THEN A MINIMUM ORDER QUANTITY APPLIES. PLEASE EMAIL, FAX OR TELEPHONE TO CONFIRM PRICE AND AVAILABILITY. IF YOUR REQUIREMENT IS NON-STANDARD, PLEASE DO NOT HESITATE TO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

David Wilson

Sales Manager

Steve Mitchell

Sale Engineer



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
a period of 20 seconds from melting point.

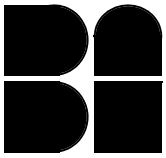
Both sides of material to be inspected,

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

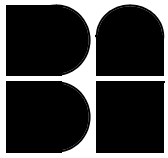
Ageing test: Test to be performed in accordance with BS 2011: Part 2.1T:1981 Method 1, ageing 3.

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.



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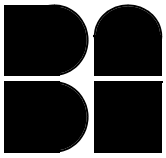
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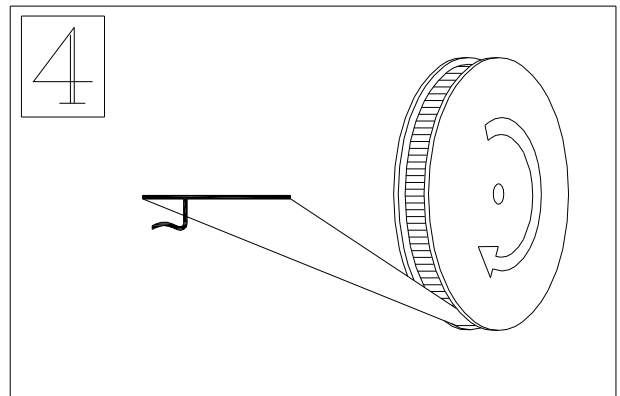
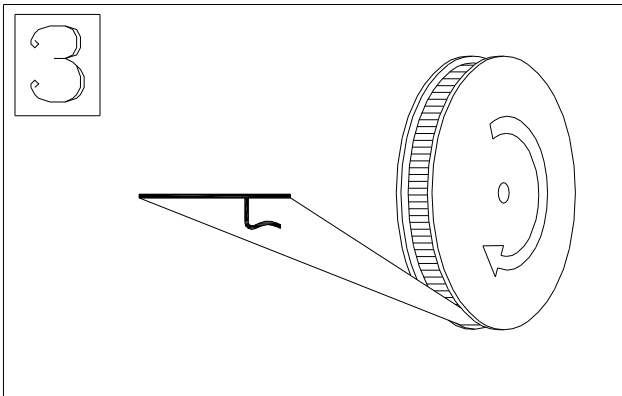
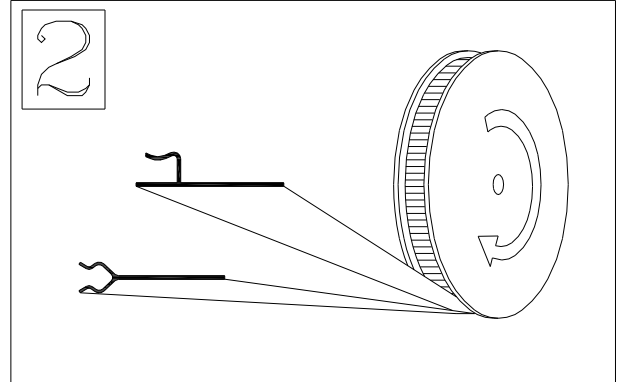
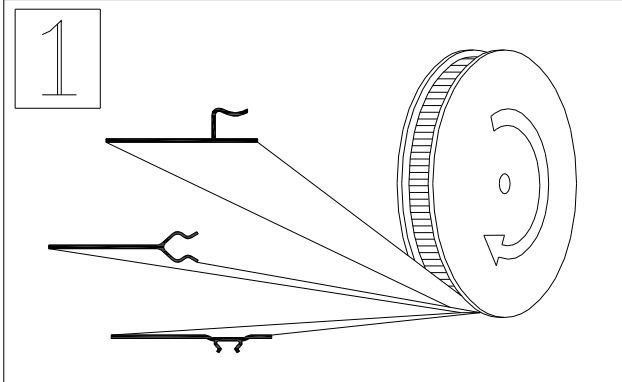
Base Material Specification

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

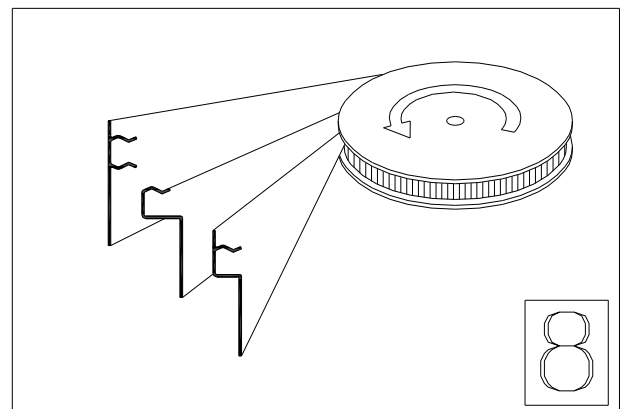
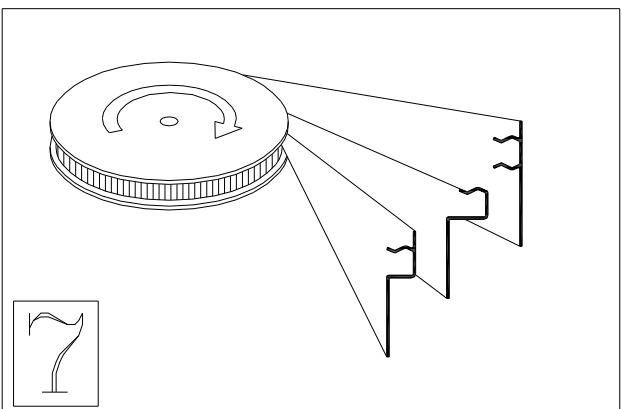
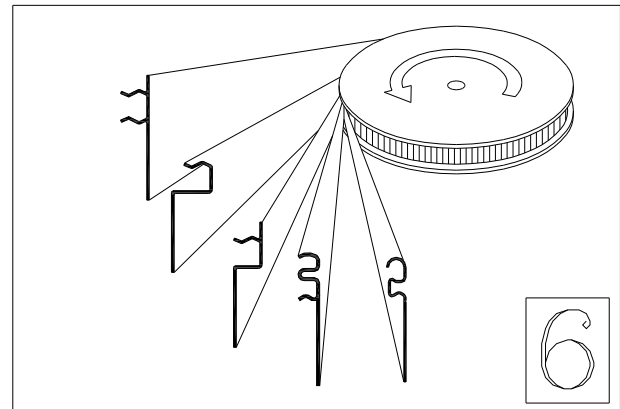
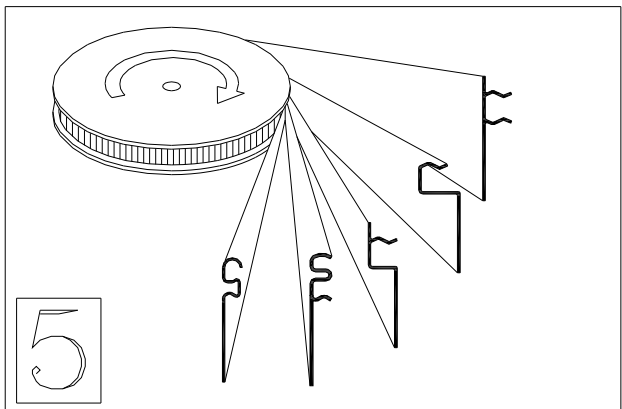


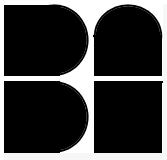
Winding Styles

Single In Line Winding Styles



Dual In Line Winding Styles



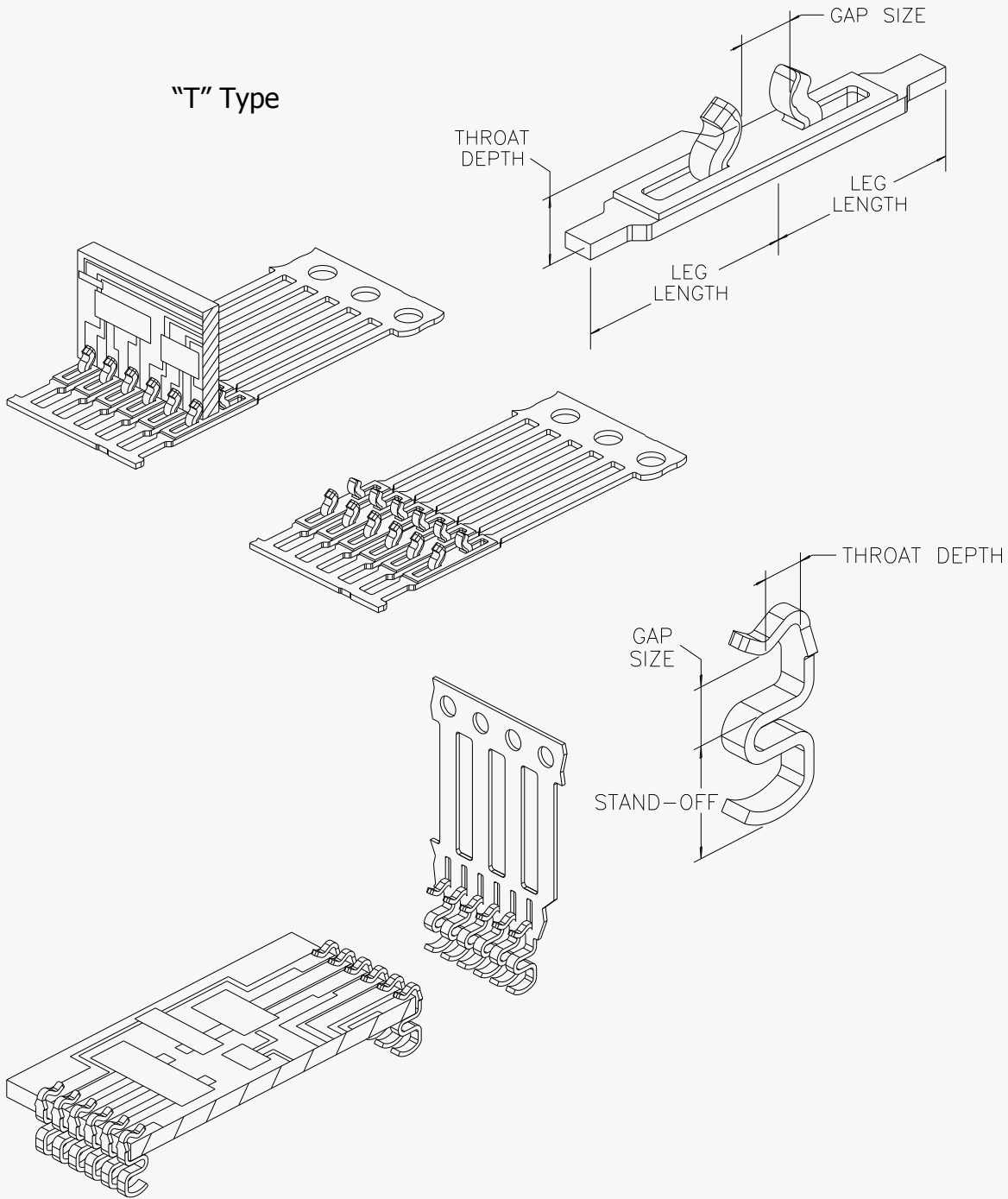


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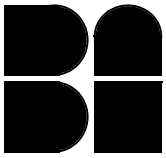
SURFACE MOUNT

Surface Mount Leadframes

"T" Type



Clip Design & Series Numbers



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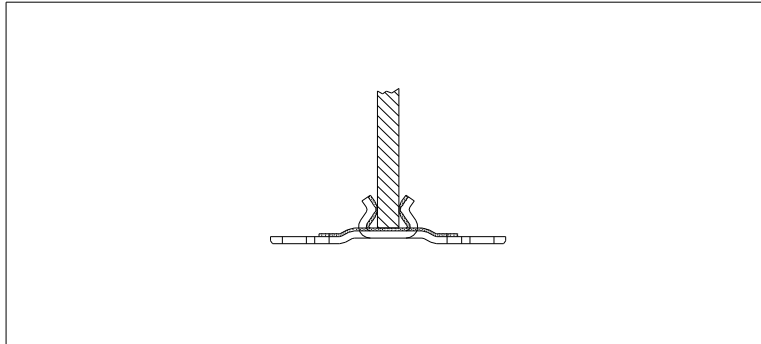
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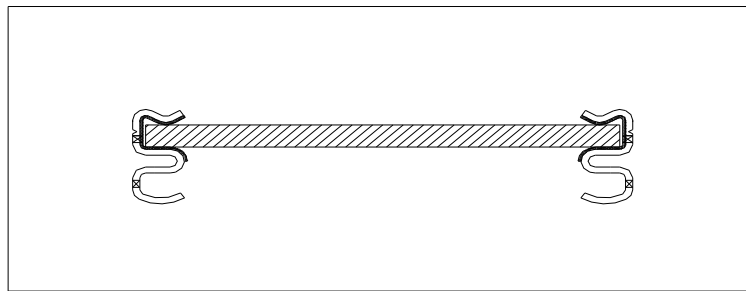
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SML Clip Design And Series Numbers

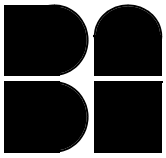


Series	Pitch	Strip Width	Substrate Size	Material thickness	Page
SM6700	1.27mm	18.1mm	0.85 to 1.08mm	0.25mm	65

SML Clip Design And Series Numbers



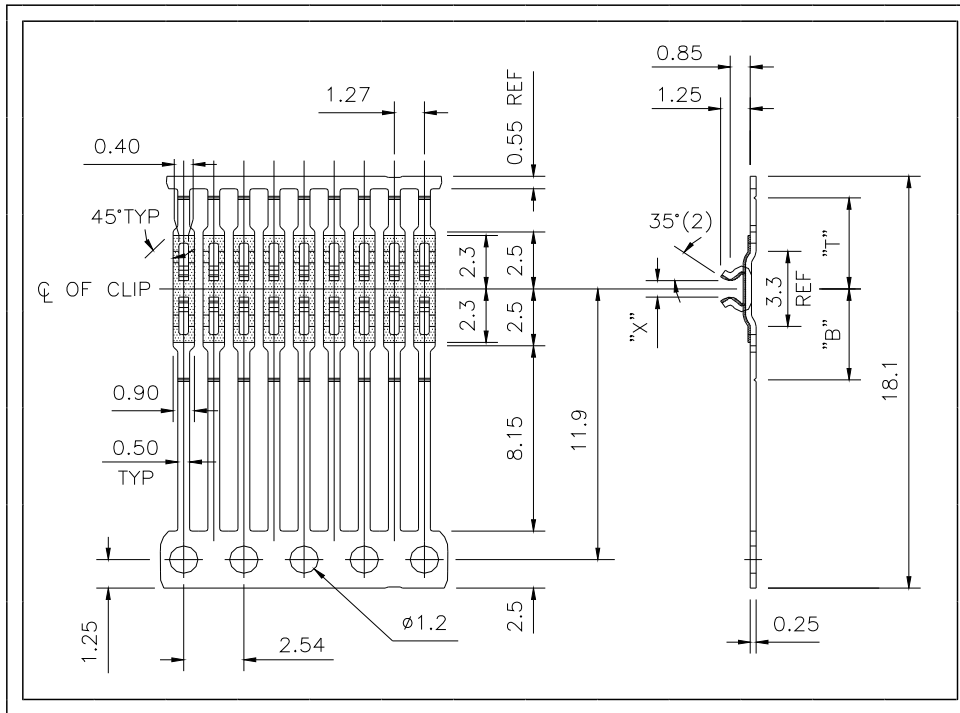
Series	Pitch	Strip Width	Substrate Size	Material thickness	Page
SM6800	1.27mm	15.8mm	0.64– 0.75mm	0.25mm	66
SM7600	1.91mm	11.2mm	0.86-1.00mm	0.25mm	67



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SML
SM6700
SERIES
SHEET 1 OF 1

Pitch
1.27 mm
0.050 inch

Strip Width
18.1mm
0.713 inch

Material Thickness
0.25mm
0.010 inch

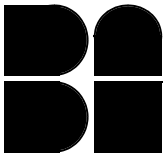
Technical Information					Ordering Information					
Substrate Size	Gap Size *X*	Stand Off	Clip Length	Part Number	Top Bar *T*	Bottom Bar *B*	On Lay Code	Plating Code	Quantity Per Reel	Wind Style
1.00-1.08mm 0.039-0.045"	0.90mm 0.035"		1.05mm 0.041"	SM6700	UB TZ	BF BZ	B3	4A	G (80K)	5 to 8
0.85-1.00mm 0.033-0.045"	0.73mm 0.028"	Sized on Ass'y To Suit FR4	1.05mm 0.041"	SM6701	UB TZ	BF BZ	B3	4A	G (80K)	5 to 8
0.87-0.94mm 0.034-0.037"	0.79mm 0.036"		1.05mm 0.041"	SM6702	UB TZ	BF BZ	B3	4A	G (80K)	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*	On Lay Code	Plating Code	Quantity Per Reel	Wind Style
SM6700	UB	BF	B3	4A	G	5



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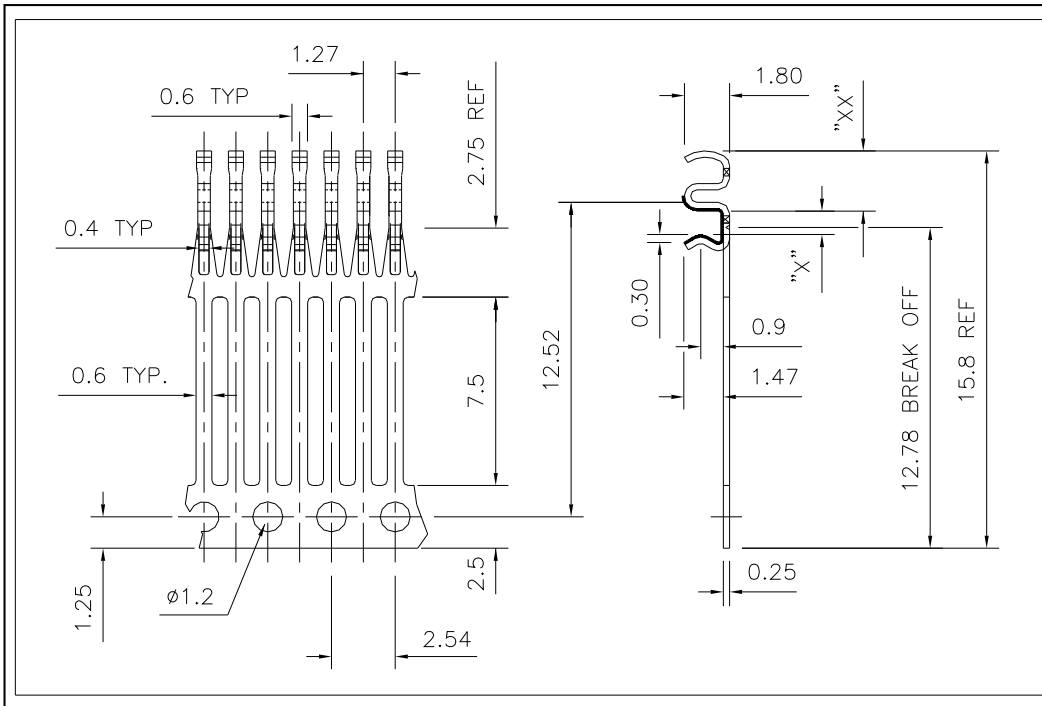
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SML
SM6800
SERIES
SHEET 1 OF 1

Pitch
1.27 mm
0.050 inch

Strip Width
15.8mm
0.622 inch

Material Thickness
0.25mm
0.010 inch

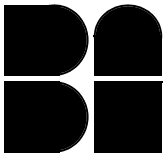
Technical Information					Ordering Information					
Substrate Size	Gap Size *X*	Stand Off *XX*	Clip Length	Part Number	Top Bar *T*	Bottom Bar *B*	On Lay Code	Plating Code	Quantity Per Reel	Wind Style
0.64-0.75mm 0.023-0.029"	0.58mm 0.0228"	2.3mm 0.091"	1.47mm 0.058"	SM6800	TZ	BR	B3	4A	G (80K)	5 to 8

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EXAMPLE OF POSSIBLE ORDER CODE

Other plating styles on request

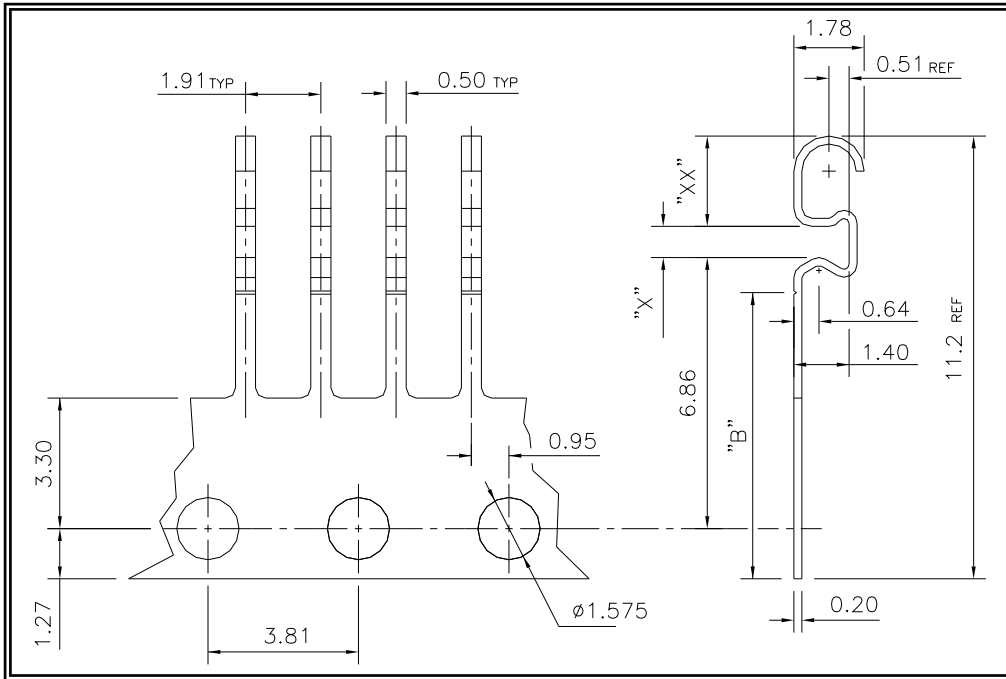
Part Number	Top Bar *T*	Bottom Bar *B*	On Lay Code	Plating Code	Quantity Per Reel	Wind Style
SM6800	TZ	BR	B3	4A	G	5



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SML
SM7600
SERIES
SHEET 1 OF 1

Pitch
1.27 mm
0.050 inch

Strip Width
11.2mm
0.622 inch

Material Thickness
0.20mm
0.008 inch

Technical Information					Ordering Information					
Substrate Size	Gap Size *X*	Stand Off *XX*	Clip Length	Part Number	Top Bar *T*	Bottom Bar *B*	On Lay Code	Plating Code	Quantity Per Reel	Wind Style
0.86-1.00mm 0.034-0.039"	0.79mm 0.031"	2.3mm 0.090"	1.40mm 0.055"	SM7600	TZ	BS	-	4A	E (40K)	5 to 8

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

EXAMPLE OF POSSIBLE ORDER CODE

Part Number	Top Bar *T*	Bottom Bar *B*	Plating Code	Quantity Per Reel	Wind Style
SM7600	TZ	BS	4A	E	5

Other plating styles on request