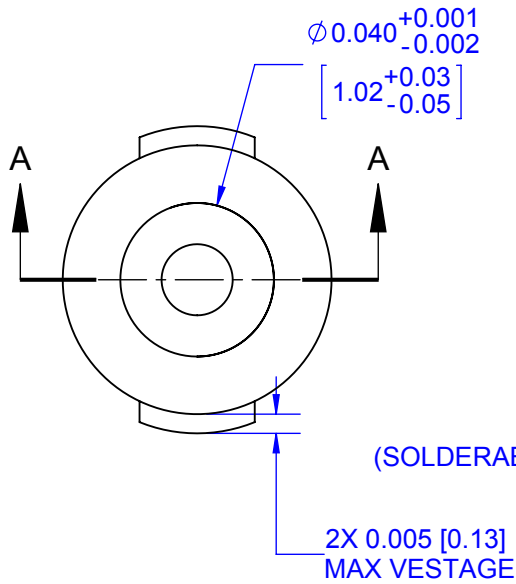
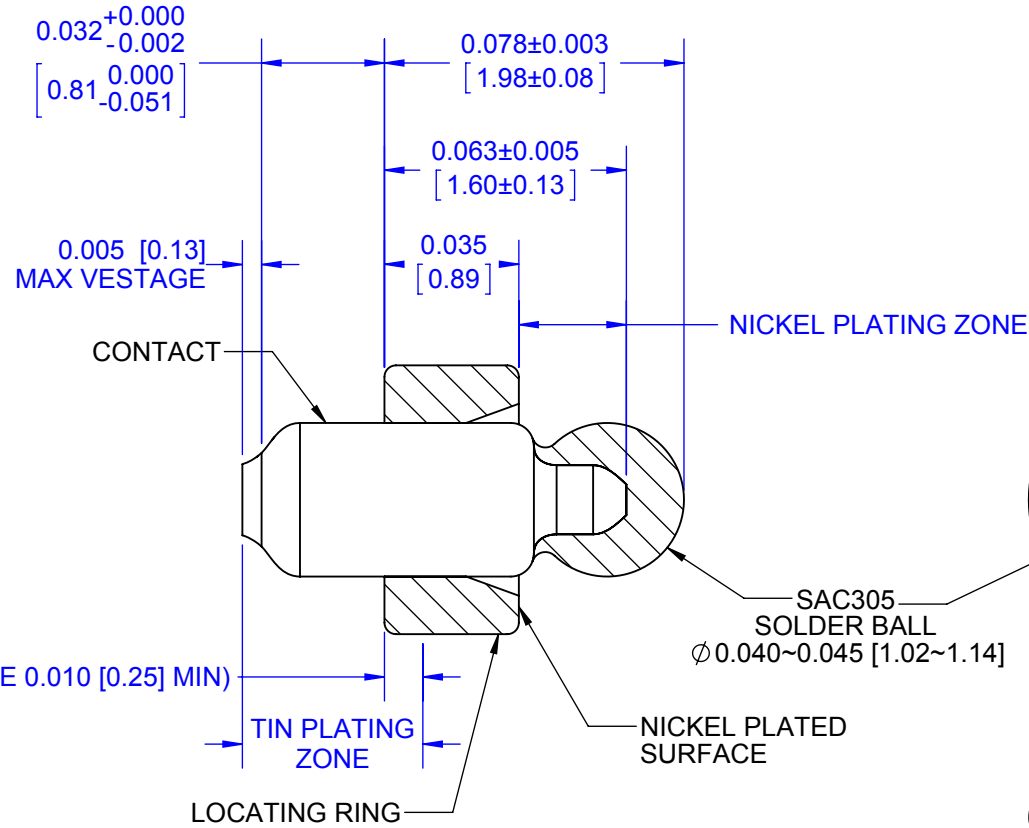


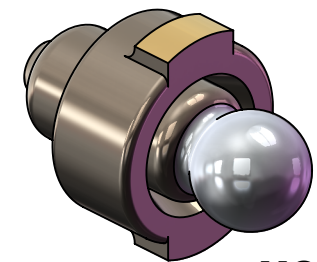
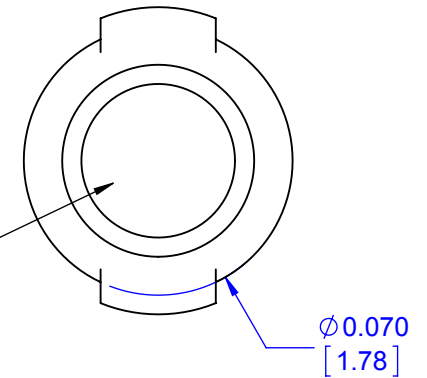
CONTACT END-VIEW



SIDE-VIEW CROSS SECTION




BALL TOP VIEW



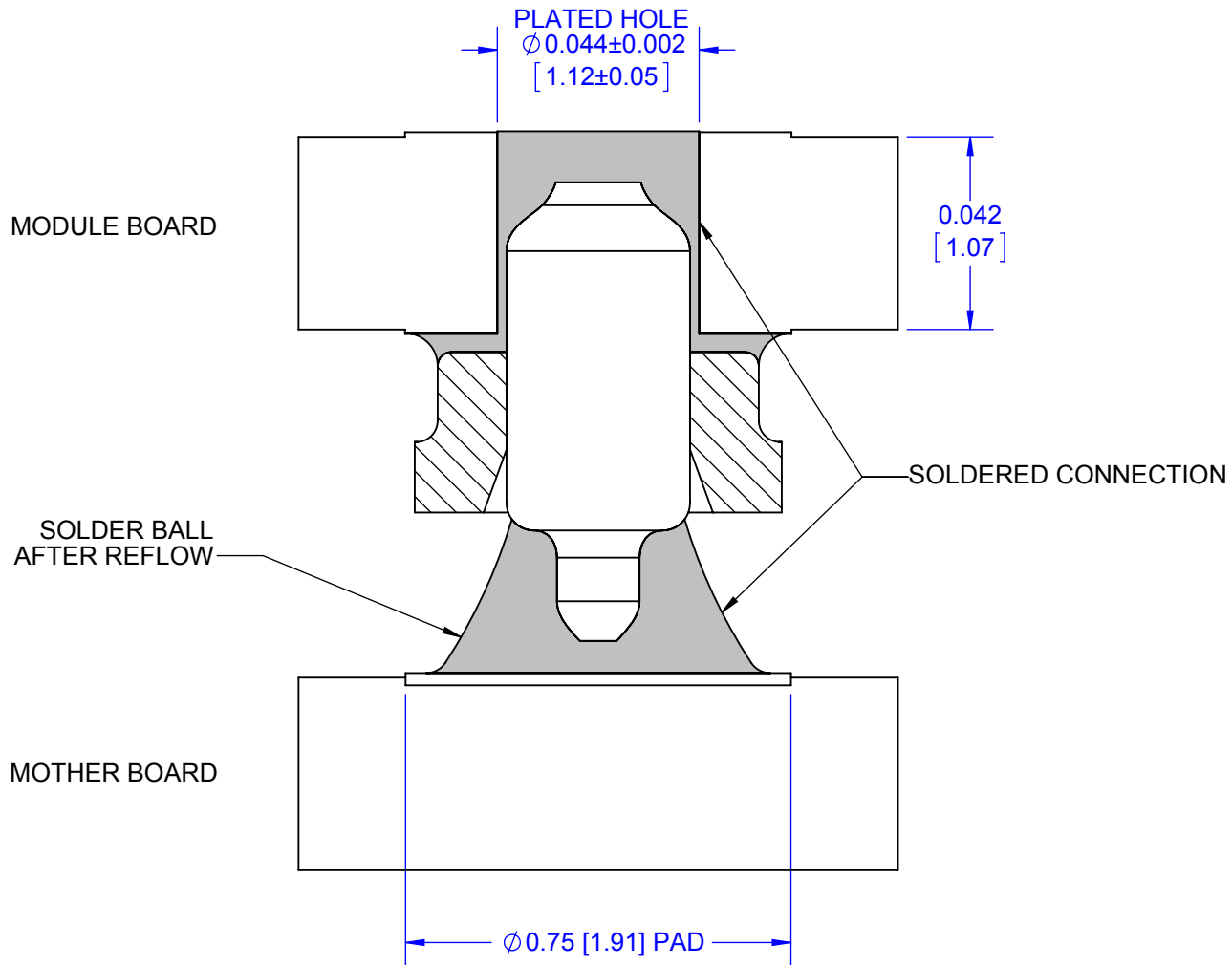
MODEL

NOTES:

- 1) DIMENSIONS INCH [mm].
- 2) SOLDER BALL ALLOY: SAC305 (Lead-Free RoHS).
- 3) CONTACT: COPPER ALLOY C11000.
- 4) LOCATING RING: BRASS ALLOY C26000.
- 5) CONTACT AND LOCATING RING FINISH: LOW STRESS TIN PLATED 200-MICROINCH [5µm] OVER 200-MICROINCH [5µm] MINIMUM NICKEL.

TOLERANCES			APPROVALS		DATE				
No of places	IN	[mm]	DRAWN	T.Au	10/23/14				
One	±.1	±2.54	ENG	M. Hart	10/23/14	TITLE SOLDER BALL SPACER SBC305			
Two	±.02	±0.5	MFG			SCALE	SIZE	DRAWING NO.	REV
Three	±.003	±0.08	QA			20:1	A	305000	A
Angular ±2°			CUST			DO NOT SCALE DRAWING			SHEET 1 OF 7
			REVISED						

MOUNTED ON PCB BOARD AFTER SOLDERING



NOTES:

- 1) DIMENSIONS INCH [mm].
- 2) RECOMMENDED PASTE SOLDER SAC305.
- 3) APPLY AS PASTE IN HOLE IN MODULE.

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TITLE SOLDER BALL SPACER
SBC305

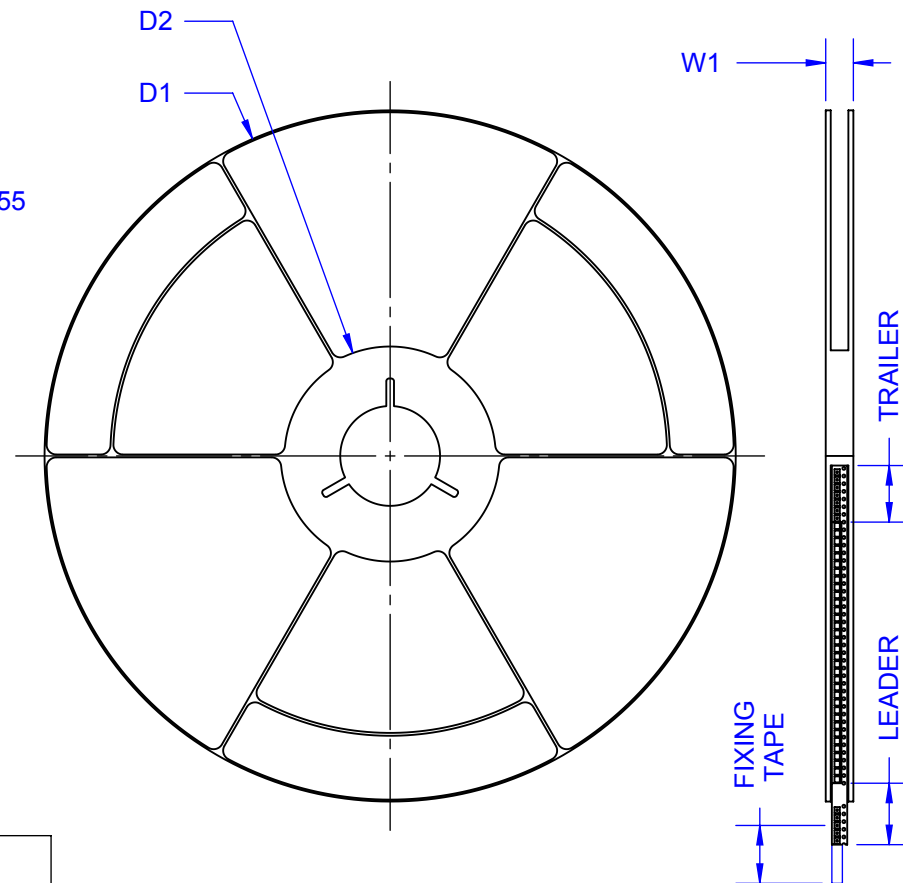
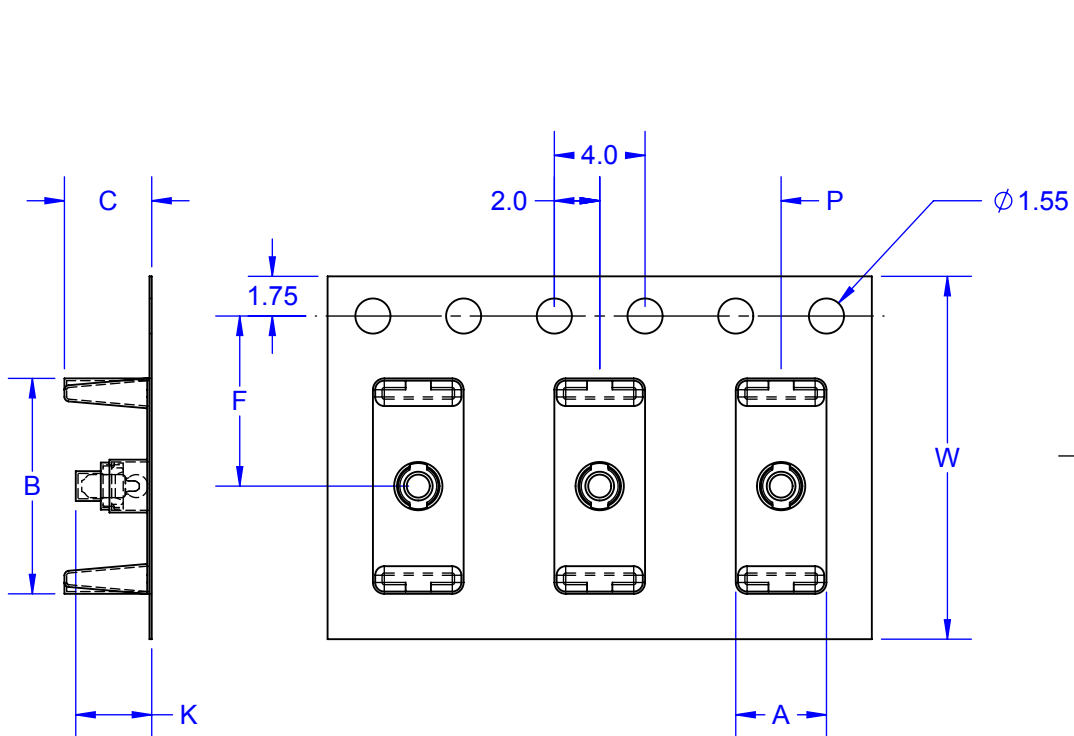
SCALE 25:1	SIZE A	DRAWING NO. 305000	REV A
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DO NOT SCALE DRAWING

SHEET 2 OF 7

TAPE SPECIFICATION
SURFACE MOUNT DEVICE

7 AND 13 INCH PACKAGE REEL



DIRECTION OF UNREELING →

PARTS ARE NON-POLARIZED

TAPE AND REEL DIMENSIONS		E7A 7-INCH	E13A 13-INCH
	SYMBOL	SBC305	SBC305
TAPE WIDTH	W	16	16
PITCH OF COMPONENTS	P	8	8
POCKET WIDTH	A	4.0	4.0
POCKET LENGTH	B	9.5	9.5
POCKET DEPTH	K	3.35	3.35
CARRIER THICKNESS	C	3.85	3.85
REEL DIAMETER	D1	180	330
HUB DIAMETER	D2	62	100
PUNCH HOLE POSITION	F	7.5	7.5
MAX REEL WIDTH	W1	18	18

ALL DIMENSION IN mm.

ALL DIMENSIONS IN mm.

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TITLE SOLDER BALL SPACER
SBC305

SCALE NONE	SIZE A	DRAWING NO. 121301	REV A
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DO NOT SCALE DRAWING

SHEET 3 OF 7

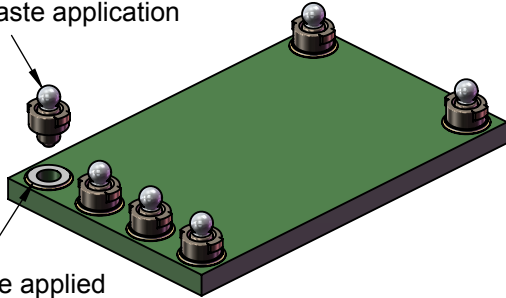
EXAMPLE PCB BOARD & ASSEMBLY

BOTTOM SIDE OF MODULE
SOLDER PASTE APPLICATION
AND SOLDER BALL PLACEMENT

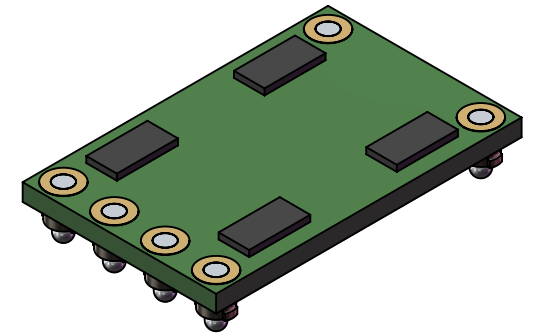
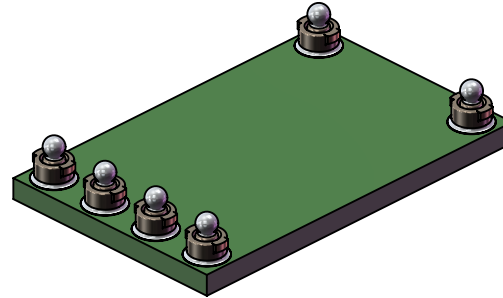
BOTTOM SIDE OF MODULE
AFTER REFLOW SOLDER BALL CONTACTS

COMPONENTS REFLOW TO
TOP SIDE OF MODULE

Use pick and place machine
to insert SBC into hole after
solder paste application

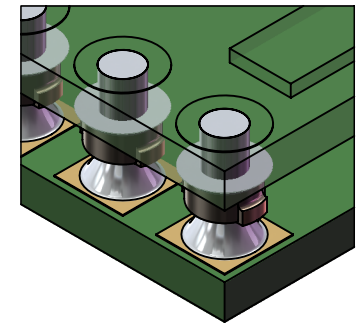
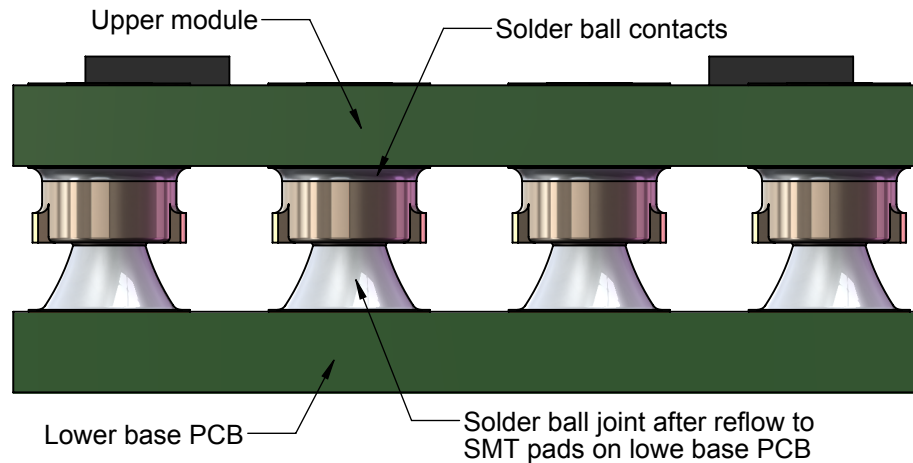


Solder Paste applied
Paste in Hole
Reflow Process



SIDE VIEW
AFTER MOUNTING MODULE
TO MOTHER BOARD

DETAIL - INNER VIEW MODULE
CONNECTED TO MOTHER BOARD



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TITLE SOLDER BALL SPACER
 SBC305

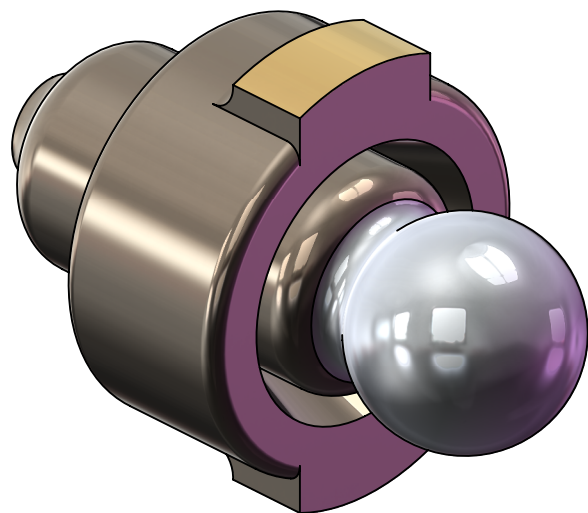
SCALE NONE	SIZE A	DRAWING NO. 305000	REV A
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DO NOT SCALE DRAWING

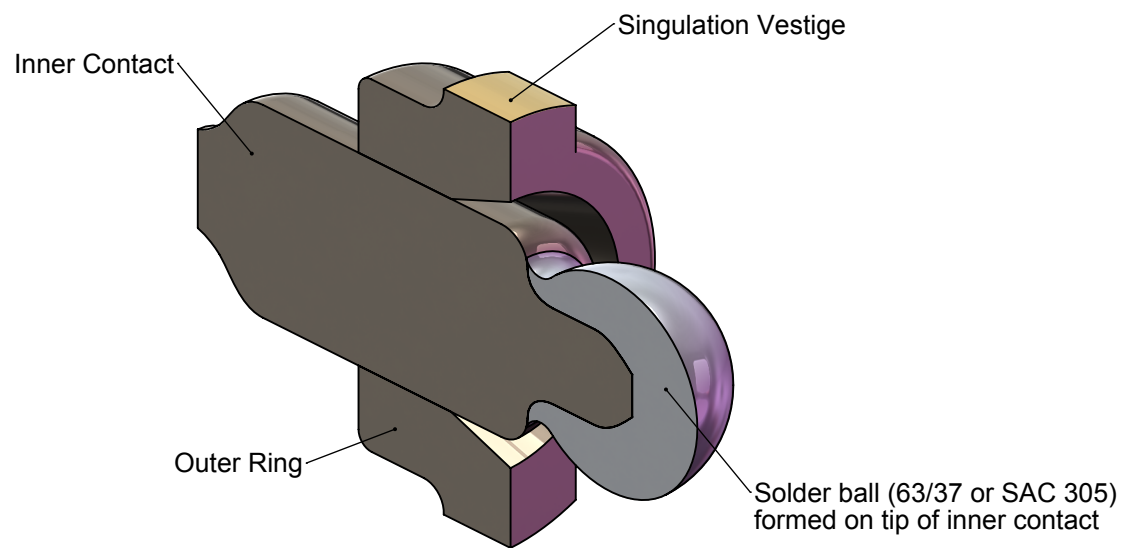
SHEET 4 OF 7

MODELS SBC305

PERSPECTIVE VIEW



SECTION VIEW



TopLine[®]

TITLE SOLDER BALL SPACER
SBC305

SCALE NONE	SIZE A	DRAWING NO. 305000	REV A
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DO NOT SCALE DRAWING

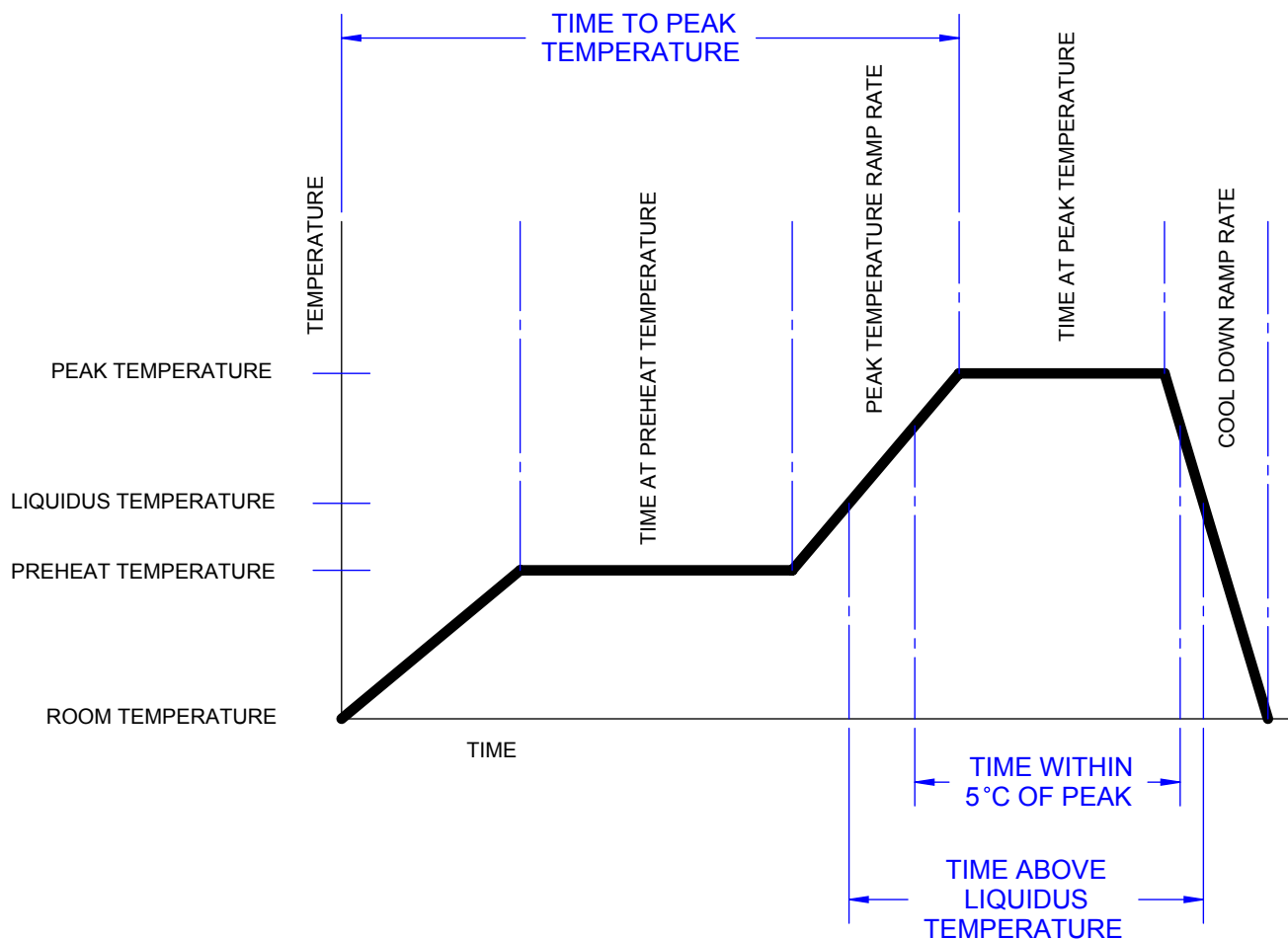
SHEET 5 OF 7

MATERIALS CONTENT DECLARATION FORM SBC305 SPACER

1 PC WT: 0.03013864 Gram					
Component Detail	Material	%	CAS No.	Weight (gms)	PPM
Contact Base Material	C11000				
	Copper	100.00%	7440-50-8	0.01250614	414954
Contact Underplate	Nickel	100.00%	7440-02-0	0.00007953	2639
Contact Plating (Selective)	Tin	100.00%	7440-31-5	0.00004771	1583
Locating Ring Base Material	C26000				
	Copper	70.00%	7440-50-8	0.00916441	304075
	Zinc	30.00%	7440-66-6	0.00392761	130318
Locating Ring Underplate	Nickel	100.00%	7440-02-0	0.00012215	4053
Locating Ring Plating (Selective)	Tin	100.00%	7440-31-5	0.00005999	1990
Solderball	Copper	0.50%	7440-50-8	0.00002116	702
	Silver	3.00%	7440-22-4	0.00012693	4212
	Tin	96.50%	7440-31-5	0.00408301	135474
Total as shipped (gms):				0.03013864	1000000

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TITLE SOLDER BALL SPACER SBC305			
SCALE NONE	SIZE A	DRAWING NO. 305000	REV A
DO NOT SCALE DRAWING			SHEET 6 OF 7

LEAD FREE REFLOW PROFILE OF SMD PACKAGE



DESCRIPTION	REQUIREMENT
AVERAGE PREHEAT RAMP RATE	3°C /SECOND MAXIMUM
PREHEAT TEMPERATURE	150°C MINIMUM, 200°C MAXIMUM
PREHEAT TIME	60 TO 80 SECONDS
RAMP TO PEAK	3°C /SECOND MAXIMUM
TIME OVER LIQUIDUS (217°C)	60 TO 150 SECONDS
PEAK TEMPERATURE	260°C +0/-5°C
TIME WITHING 5°C OF PEAK	20 TO 40 SECONDS
RAMP - COOL DOWN	6°C /SECONDS MAXIMUM
TIME 25°C TO PEAK	6 MINUTES MAXIMUM

TopLine®			
TITLE		SOLDER BALL SPACER SBC305	
SCALE	SIZE	DRAWING NO.	REV
NONE	A	305000	A
DO NOT SCALE DRAWING			SHEET 7 OF 7