

## *Data Sheet*

Customer: \_\_\_\_\_

Product: Square Air Coil – SQB Series \_\_\_\_\_

Size : 1515/2222/2929 \_\_\_\_\_

Issued Date: 26-Jun-2015 \_\_\_\_\_

Edition: Ver. 1 \_\_\_\_\_

### Record of change

Date	Ver.	Description	Page
26-Jun.-2015	1		

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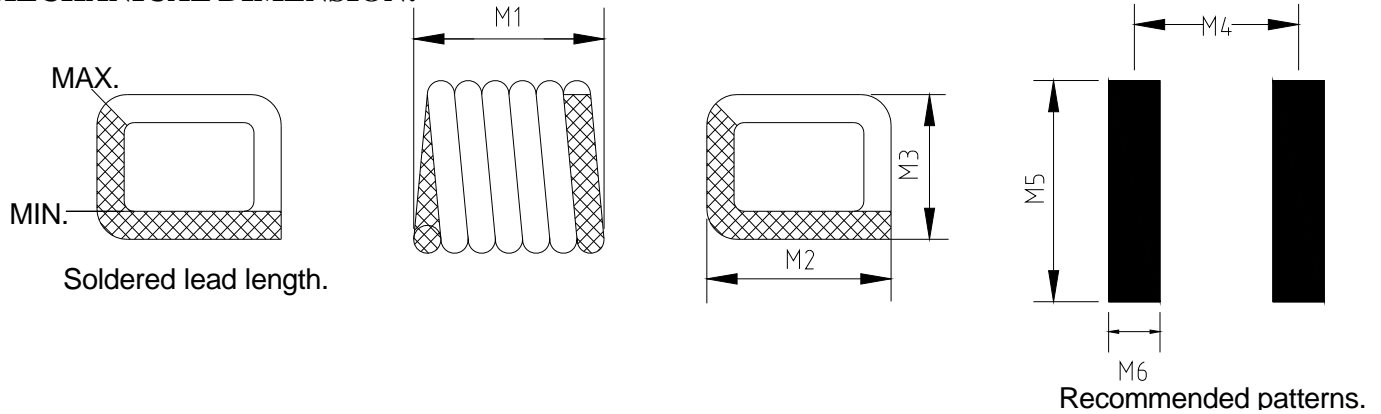
Prepared by	Checked by	Approved by	Accepted by (customer)
26-Jun.-2015	26-Jun.-2015	26-Jun.-2015	
<i>Andy Hsu</i>	<i>Hwa Wu</i>	<i>Hwa Wu</i>	

**Feature:**

- Excellent Q factors – up to 230
- Current handling as high as 5.7 Amps!
- Inductance values from 47 to 500 nH
- Flat top and bottom for reliable pick and place and mechanical stability
- All Values are available in 2% tolerance.

※Graphic is only for dimensionally application.

**1. MECHANICAL DIMENSION:**



UNIT :mm

PART NO.	M1	M2	M3	M4	M5	M6
SQB1515T47N□□	4.06±0.254	3.56±0.178	3.73±0.178	3.56	4.45	1.78
SQB1515T68N□□	4.06±0.254	3.56±0.178	3.73±0.178	3.56	4.45	1.78
SQB1515T82N□□	4.06±0.254	3.56±0.178	3.73±0.178	3.56	4.45	1.78

PART NO.	M1	M2	M3	M4	M5	M6
SQB2222T90N□□	5.21±0.381	5.46±0.254	5.69±0.254	4.70	6.35	2.16
SQB2222TR11□□	5.21±0.381	5.46±0.254	5.69±0.254	4.70	6.35	2.16
SQB2222TR13□□	5.21±0.381	5.46±0.254	5.69±0.254	4.70	6.35	2.16
SQB2222TR16□□	5.21±0.381	5.46±0.254	5.69±0.254	4.70	6.35	2.16
SQB2222TR18□□	5.21±0.381	5.46±0.254	5.69±0.254	4.70	6.35	2.16
SQB2222TR22□□	5.21±0.381	5.46±0.254	5.69±0.254	4.70	6.35	2.16
SQB2222TR27□□	5.21±0.381	5.46±0.254	5.69±0.254	4.70	6.35	2.16
SQB2222TR30□□	5.21±0.381	5.46±0.254	5.69±0.254	4.70	6.35	2.16

PART NO.	M1	M2	M3	M4	M5	M6
SQB2929TR33□□	10.29±0.381	7.49±0.254	7.24±0.254	9.53	8.26	2.29
SQB2929TR36□□	11.30±0.381	7.49±0.254	7.24±0.254	10.541	8.26	2.29
SQB2929TR39□□	12.32±0.381	7.49±0.254	7.24±0.254	11.56	8.26	2.29
SQB2929TR43□□	13.21±0.381	7.49±0.254	7.24±0.254	12.45	8.26	2.29
SQB2929TR50□□	14.00±0.381	7.49±0.254	7.24±0.254	13.21	8.26	2.29

## 2. ELECTRICAL:

PART NO.	Tolerance	Inductance (nH)	Q (MIN)	Test Freq (MHz)	DCR MAX (mΩ)	SRF (GHz) TYP	Rated current(A) MAX
SQB1515T47N□□	G,J	47	230	400	6.35	1.87	4.90
SQB1515T68N□□	G,J	68	230	400	8.60	2.13	5.50
SQB1515T82N□□	G,J	82	230	400	9.40	1.79	5.60

PART NO.	Tolerance	Inductance (nH)	Q (MIN)	Test Freq (MHz)	DCR MAX (mΩ)	SRF (GHz) TYP	Rated current(A) MAX
SQB2222T90N□□	G,J	90	140	50	5.50	1.15	5.00
SQB2222TR11□□	G,J	110	140	50	6.50	1.00	5.70
SQB2222TR13□□	G,J	130	140	50	7.50	1.00	5.40
SQB2222TR16□□	G,J	160	140	50	8.25	1.00	5.70
SQB2222TR18□□	G,J	180	140	50	9.50	1.10	5.00
SQB2222TR22□□	G,J	220	140	50	11.0	1.00	5.00
SQB2222TR27□□	G,J	270	140	50	12.5	0.80	4.30
SQB2222TR30□□	G,J	330	150	50	13.8	0.72	3.70

PART NO.	Tolerance	Inductance (nH)	Q (MIN)	Test Freq (MHz)	DCR MAX (mΩ)	SRF (GHz) TYP	Rated current(A) MAX
SQB2929TR33□□	G,J	330	180	50	12.5	0.66	4.70
SQB2929TR36□□	G,J	360	180	50	13.5	0.62	4.50
SQB2929TR39□□	G,J	390	180	50	14.5	0.59	4.40
SQB2929TR43□□	G,J	430	180	50	15.5	0.55	4.20
SQB2929TR50□□	G,J	500	180	50	16.5	0.50	4.30

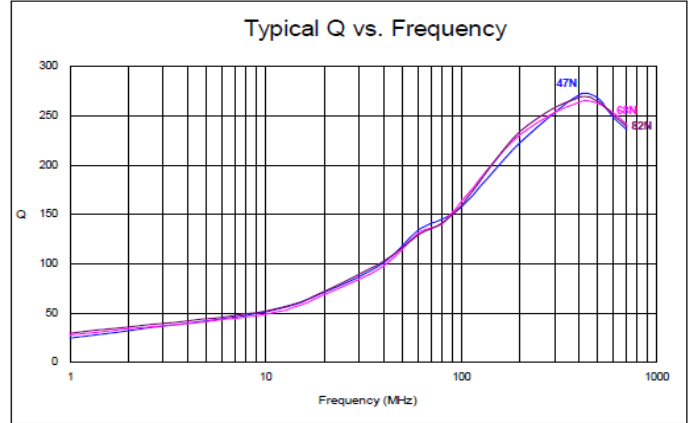
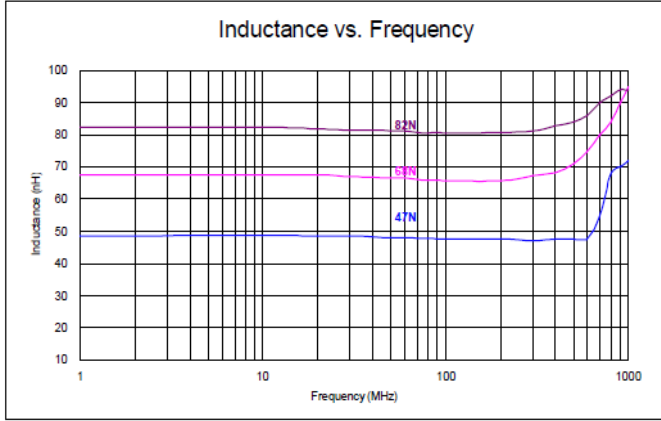
TEST INSTRUMENT : HP4291B / FIXTURE HP16193A

NOTE :

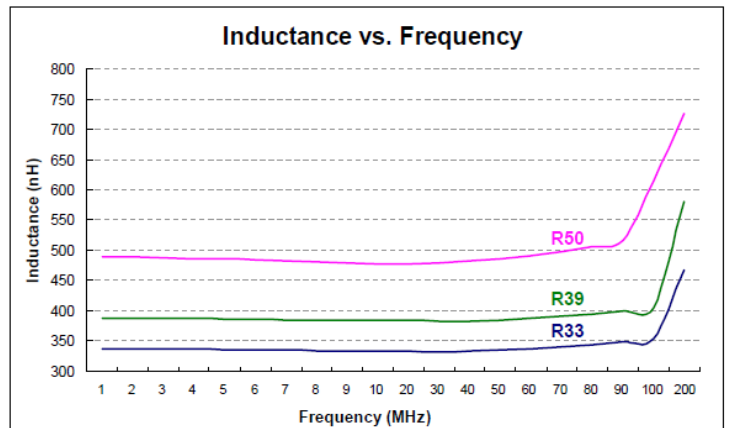
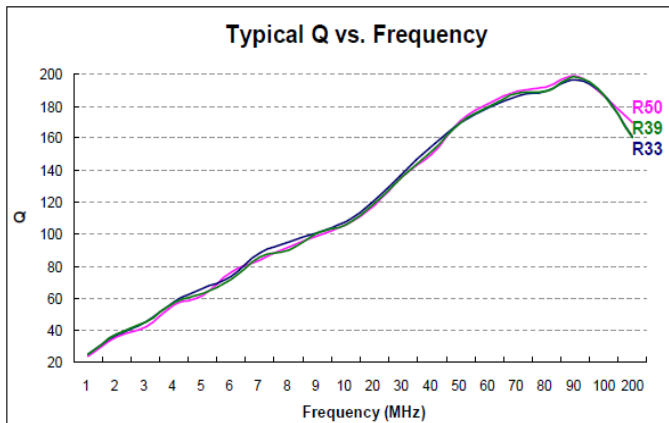
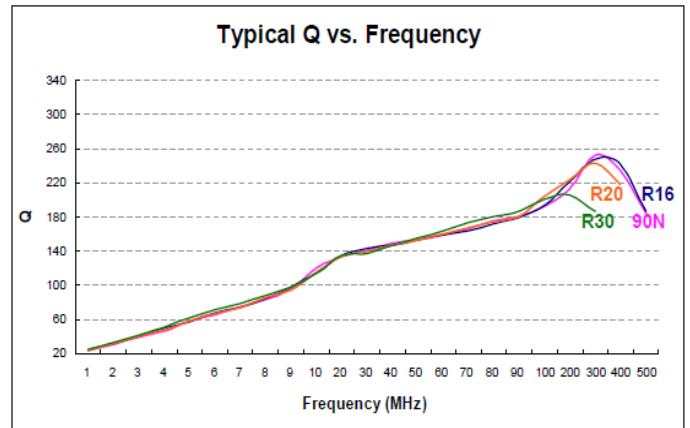
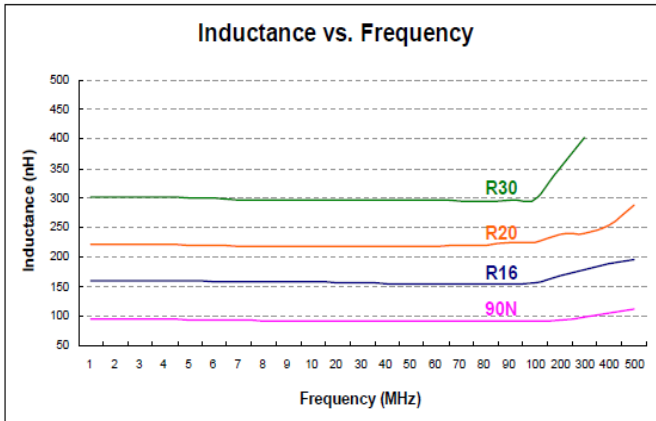
1. Tolerance : G:±2%,J:±5%
2. Inductance & Q measured on the HP4291B. With HP16193A test fixture.
3. SRF measured using the HP8753 network analyzer.
4. Operating temperature range: -40°C to +125°C with Irms current, +125°C to +145°C with derated current.
5. Storage temperature Component:-40°C to +145°C. , Packaging : -40°C. TO +80°C.
6. Electrical specifications at 25°C.
7. Current that causes a 20°C temperature rise from 25°C ambient.

### 3. CHARACTERISTIC CURVES

#### SQB1515



#### SQB2222

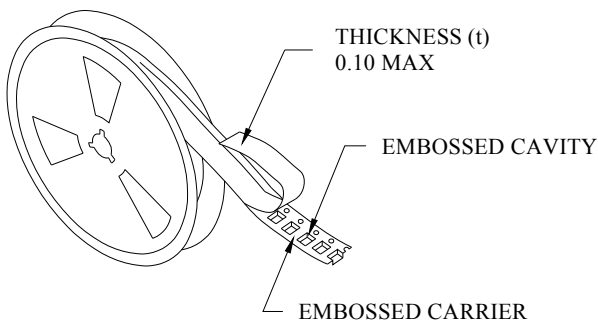


#### SQB2929

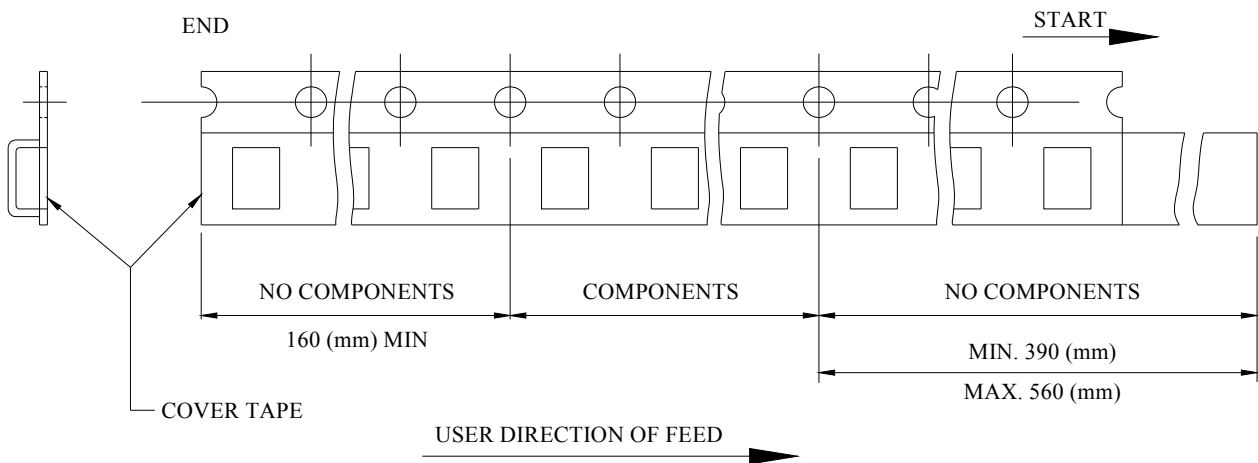
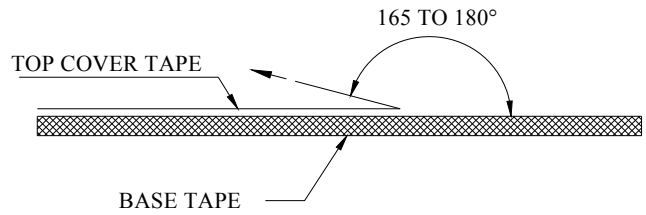
#### 4. RELIABILITY TEST

Test Item	Test Condition	Standard Source
Salt Spray Test	Chamber temperature 35°C, the concentration of salt spray 5% (Total 24 hours).	MIL-STD-202G Method 101E Test Condition C
Humidity Test	+40°C±2°C, humidity of 90%±5% (total 96 hours).	MIL-STD-202G Method 103B Test Condition B
High Temperature Storage	1.Temperature: +125°C±2°C 2.Test time:48±2hrs	IEC 68-2 Test Condition B
Low Temperature Storage	1.Temperature: -40°C±2°C 2.Test time: 48±2hrs	IEC 68-2 Test Condition A
Thermal Shock	+125°C±5°C (30 minutes) ~ -40 ± 5°C (30 minutes), temperature switch time: 5 minutes (total 50 cycles).	MIL-STD-202G Method 107G Test Condition B-2
Life Test	+75°C±2°C (300Hours)	MIL-STD-202G Method 108A Test Condition D
Vibration Test	10-55-10HZ, amplitude: 1.5mm, direction: X, Y, Z axes, each axis 2 hours (total 6 hours).	MIL-STD-202G Method 201A
Solder Heat Resistance Test	DIP: Soak in 260°C solder pot, stay 10Sec Reflow: Keep 250±5°C,30±5Sec in air, Temperature ramp:+1~4°C/sec; Above1 83°C, must keep 90 s - 120 s.	MIL-STD-202G Method 210F Test Condition B(DIP) Test Condition (Reflow)
Terminal Pull Strength Test	1/2, 1, 2, 3, 5, 10 Pound, as products terminal feature.	MIL-STD-202G Method 211A Test Condition A
Solder Ability Test	Soak in 245 °C solder pot of 3Sec, PAD must have 95% above coverage.	J-STD-003B
Terminal Push Strength Test	No special requirements: 5N thrust to maintain 10 Sec.	JIS C5321:1997

## 5. PACKAGING

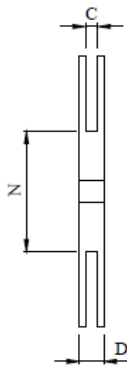
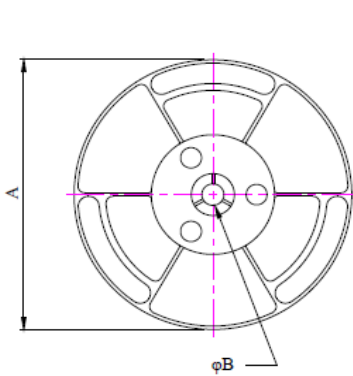


- THE FORCE FOR TEARING OFF COVER TAPE IS 10 TO 130 GRAMS IN THE ARROW DIRECTION.

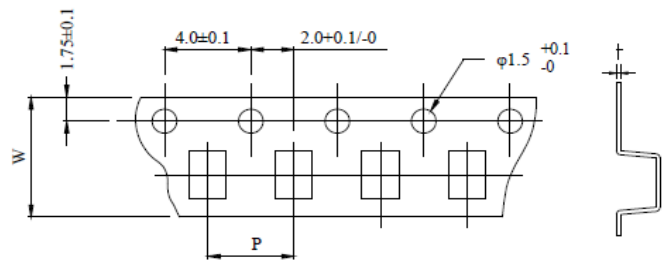


### ■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC



### ■ DIMENSIONS OF CARRIER TAPE (mm)

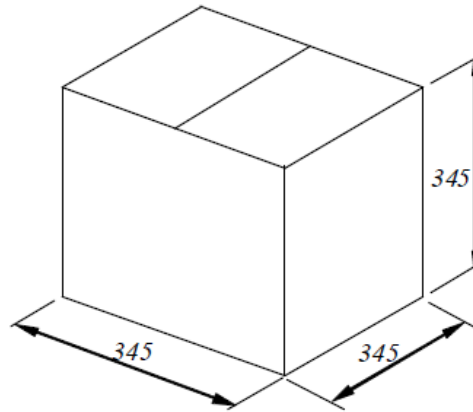
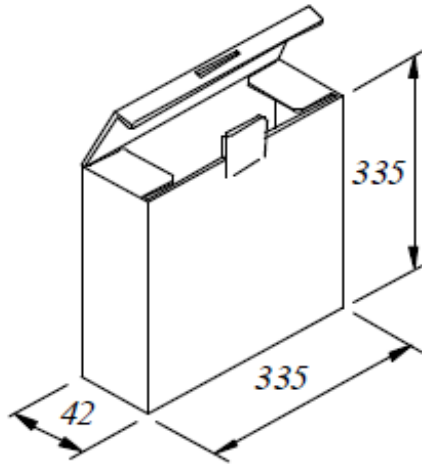


UNIT:mm

ITEM	A	B	C	D	N	W	P	t
DIM.	330	13.0	24.5	30.4	100	24.0	12.0	0.40
TOL.	MAX	$\pm 0.2$	$\pm 0.2$	MAX.	$\pm 0.5$	$\pm 0.3$	$\pm 0.1$	$\pm 0.05$

unit : mm

- CONSTRUCTION:  
THE CASE CONTAINS 1-24mm WIDE CARRIER TAPES.  
QTY : 750 / REEL  
750 / BOX



## 6. Typical RoHs Reflow Soldering Profile

