

Data Sheet

Customer : _____

Product : Square Air Coil – SQB Series

Size : 1111 / 1515 / 2222 / 2929

Issued Date: 11-Oct-2023

Edition : Ver. 3

Record of change

Date	Ver.	Description	Page
26-Jun.-2015	1		
02-May.-2018	2	Add size 1111	
11-Oct.-2023	3	Revise electrical curve & packaging	2,3,4,6

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Prepared by	Checked by	Approved by	Accepted by (customer)
11-Oct.-2023	11-Oct.-2023	11-Oct.-2023	
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Square Air Coil

SQB Series

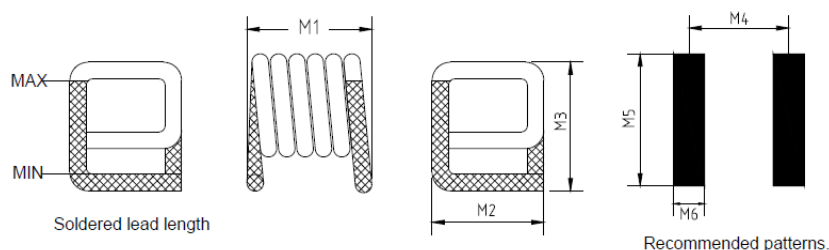
Feature:

- Excellent Q factors , high current handling. All Values are available in 2% tolerance.
- Flat top and bottom for reliable pick and place and mechanical stability

※This is a RoHS and REACH compliant product whose related are available on request.

※Graphic is only for dimensionally application.

MECHANICAL DIMENSION: (UNIT :mm)



Part number	M1	M2	M3	M4	M5	M6
SQB1111T27N□□	2.67±0.254	2.67±0.127	2.79±0.127	2.29	3.05	1.02
SQB1111T30N□□	2.67±0.254	2.67±0.127	2.79±0.127	2.29	3.05	1.02
SQB1111T33N□□	2.92±0.254	2.67±0.127	2.79±0.127	2.54	3.05	1.02
SQB1111T36N□□	2.92±0.254	2.67±0.127	2.79±0.127	2.54	3.05	1.02
SQB1111T39N□□	2.92±0.254	2.67±0.127	2.79±0.127	2.54	3.05	1.02
SQB1111T43N□□	3.30±0.254	2.67±0.127	2.79±0.127	2.79	3.05	1.02
SQB1111T47N□□	3.30±0.254	2.67±0.127	2.79±0.127	2.79	3.05	1.02
SQB1515T47N□□	4.06±0.254	3.56±0.178	3.73±0.178	3.56	4.45	1.78
SQB1515T68N□□	5.33±0.254	3.56±0.178	3.73±0.178	4.83	4.45	1.78
SQB1515T82N□□	5.84±0.254	3.56±0.178	3.73±0.178	5.33	4.45	1.78
SQB2222T90N□□	5.21±0.381	5.46±0.254	5.69±0.254	4.70	6.35	2.16
SQB2222TR11□□	6.35±0.381	5.59±0.254	5.69±0.254	5.84	6.73	2.16
SQB2222TR13□□	6.73±0.381	5.59±0.254	5.69±0.254	6.22	6.73	2.16
SQB2222TR16□□	7.37±0.381	5.59±0.254	5.69±0.254	6.60	6.73	2.16
SQB2222TR18□□	8.13±0.381	5.59±0.254	5.69±0.254	7.37	6.73	2.16
SQB2222TR22□□	9.91±0.381	5.59±0.254	5.69±0.254	9.14	6.73	2.16
SQB2222TR27□□	11.68±0.381	5.59±0.254	5.69±0.254	10.67	6.73	2.16
SQB2222TR30□□	11.94±0.381	5.72±0.254	5.69±0.254	11.18	6.73	2.16
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

Part numbering:

SQB	1111	I	82N	□	□
Series	Size	Package	Inductance	Tolerance	Internal code
	1111	Tape&Reel	82N = 82nH	G = ±2%	
	1515		R22 = 0.22uH	J = ±5%	
	2222				
	2929				

Square Air Coil

SQB Series

ELECTRICAL SPECIFICATION

Part number	Inductance (nH)	Inductance Tolerance	Q TYP.	Test Frequency (MHz)	SRF (GHz) MIN.	DC Resistance (mΩ) MAX.	Irms (A) MAX.
SQB1111T27N□□	27	G,J	200	400	2.6	8.1	5.5
SQB1111T30N□□	30	G,J	200	400	2.4	8.3	5.5
SQB1111T33N□□	33	G,J	200	400	2.3	9.5	4.8
SQB1111T36N□□	36	G,J	200	400	2.3	9.8	4.8
SQB1111T39N□□	39	G,J	200	400	2.2	10.0	4.8
SQB1111T43N□□	43	G,J	200	400	2.2	10.8	4.4
SQB1111T47N□□	47	G,J	200	400	2.2	11.3	4.4
SQB1515T47N□□	47	G,J	230	400	1.87	6.35	4.9
SQB1515T68N□□	68	G,J	230	400	2.13	8.60	5.5
SQB1515T82N□□	82	G,J	230	400	1.79	9.40	5.6
SQB2222T90N□□	90	G,J	140	50	1.15	5.50	5.0
SQB2222TR11□□	110	G,J	140	50	1.00	6.50	5.7
SQB2222TR13□□	130	G,J	140	50	1.00	7.50	5.4
SQB2222TR16□□	160	G,J	140	50	1.00	8.25	5.7
SQB2222TR18□□	180	G,J	140	50	1.10	9.50	5.0
SQB2222TR22□□	220	G,J	140	50	1.00	11.0	5.0
SQB2222TR27□□	270	G,J	140	50	0.80	12.5	4.3
SQB2222TR30□□	330	G,J	150	50	0.72	13.8	3.7
SQB2929TR33□□	330	G,J	180	50	0.66	12.5	4.7
SQB2929TR36□□	360	G,J	180	50	0.62	13.5	4.5
SQB2929TR39□□	390	G,J	180	50	0.59	14.5	4.4
SQB2929TR43□□	430	G,J	180	50	0.55	15.5	4.2
SQB2929TR50□□	500	G,J	180	50	0.50	16.5	4.3

TEST INSTRUMENT : HP4291B / FIXTURE HP16193A

NOTE :

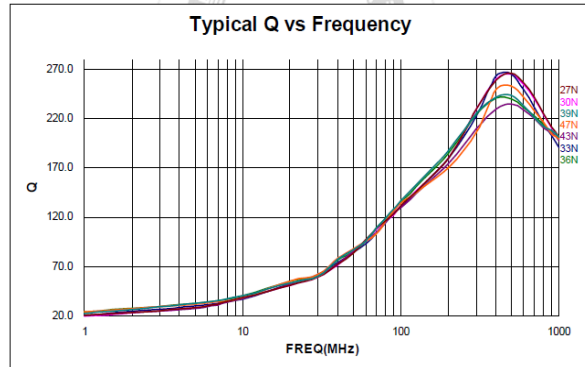
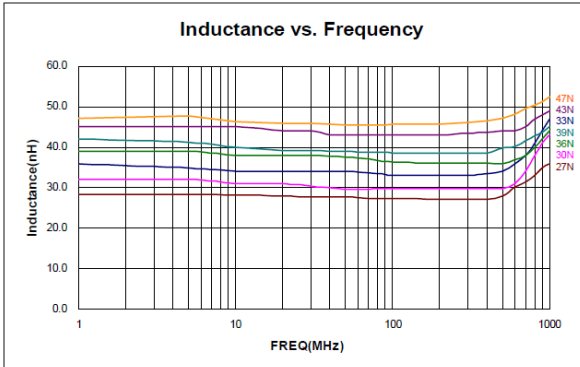
1. Inductance & Q measured on the HP4291B. With HP16193A test fixture.
2. Operating temperature range: -25°C to +125°C.
3. Storage temperature Component: -25°C to +85°C.
4. SRF measured using an Agilent/HP8753 network analyzer.
5. Current that causes a 20°C temperature rise from 25°C ambient.
6. Tolerance : G:±2%,J:±5%

Square Air Coil

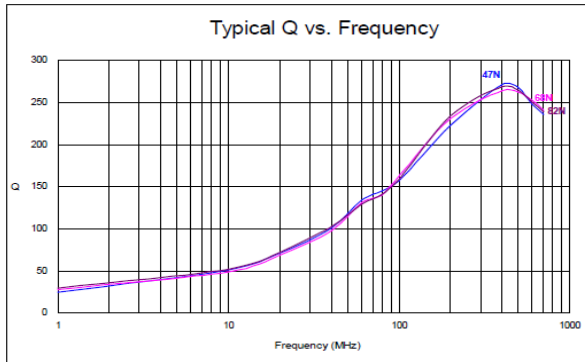
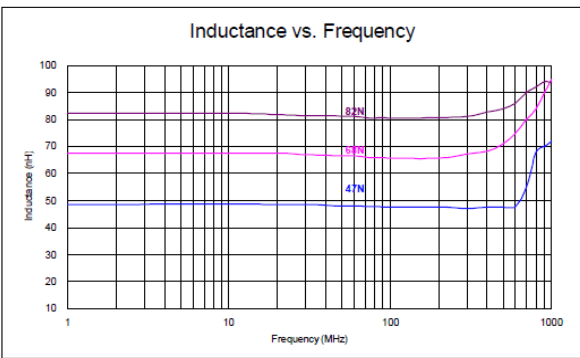
SQB Series

ELECTRICAL CURVES

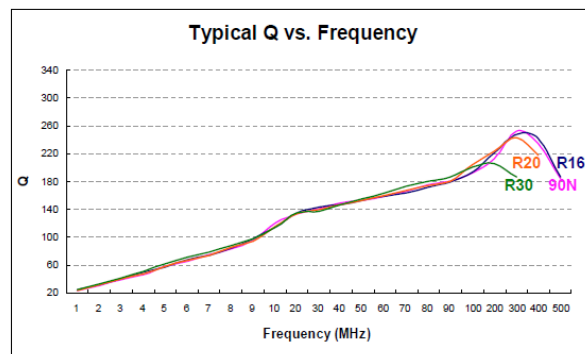
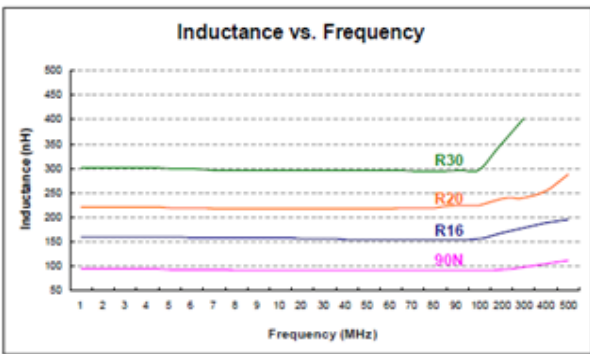
SQB1111



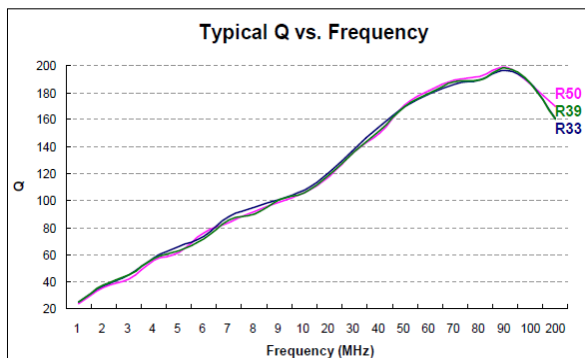
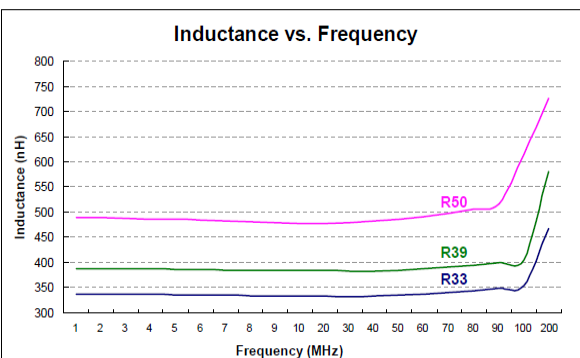
SQB1515



SQB2222



SQB2929



Square Air Coil

SQB Series

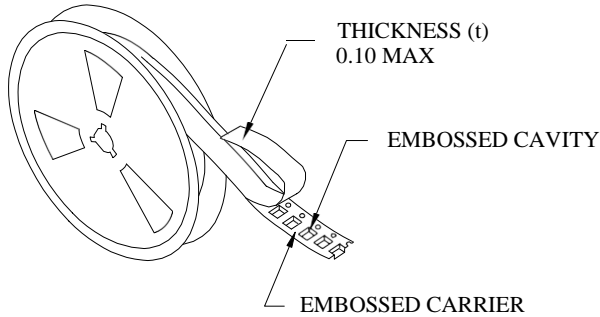
RELIABILITY TEST

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; Above 183°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

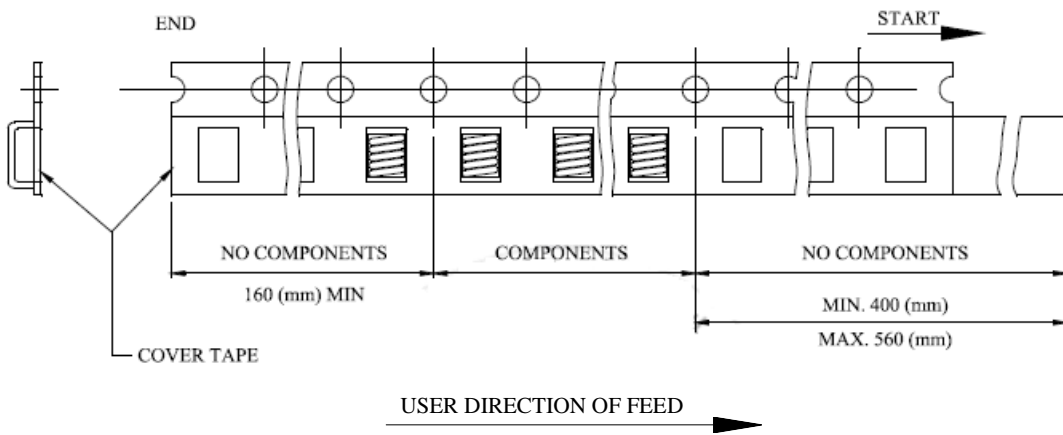
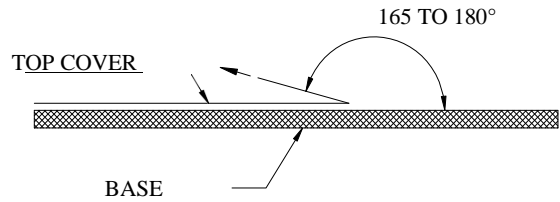
Square Air Coil

SQB Series

PACKAGING



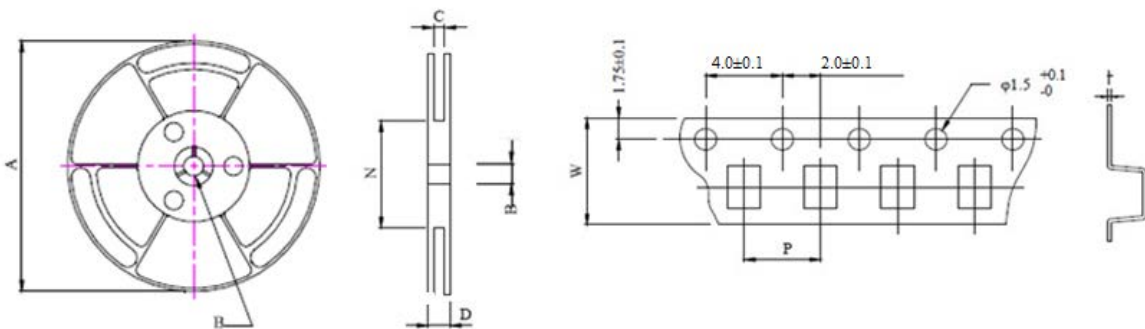
- THE FORCE FOR TEARING OFF COVER TAPE IS 10 TO 130 GRAMS IN THE ARROW DIRECTION.



■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC

■ DIMENSIONS OF CARRIER TAPE (mm)



ITEM	A	B	C	D	N	P	W	t
SQB1111.	330MAX.	13.0±0.2	12.4±0.2	18.4MAX.	100±0.5	8.0±0.1	12.0±0.3	0.35±0.05
SQB1515.	330MAX.	13.0±0.2	12.4±0.2	18.4MAX.	100±0.5	8.0±0.1	12.0±0.3	0.40±0.05
SQB2222	330MAX.	13.0±0.2	16.4±0.2	22.4MAX.	100±0.5	12.0±0.1	16.0±0.3	0.40±0.05
SQB2929	330MAX.	13.0±0.2	24.5±0.2	30.4MAX.	100±0.5	12.0±0.1	24.0±0.3	0.40±0.05

Typical RoHs Reflow Soldering Profile

