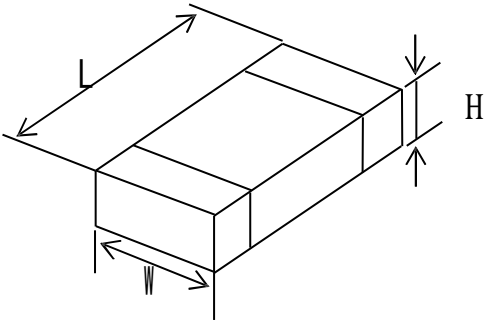


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<p>SHAPES</p> 		ELECTRICAL CHARACTERISTICS	
		L	0.47~4.7uH
		IDC (Max.)	1100~1500mA
		SRF (Min.)	30~100 MHz
		DCR (Max.)	100~175 mΩ
DIMENSIONS		TEST FREQUENCY	
L m/m	2.0 ± 0.30	10 MHz	
W m/m	1.6 ± 0.20		
H m/m	0.9 ± 0.10		
		TEST EQUIPMENT	
		HP-4291A IMPEDANCE ANALYZER	

ORDERING CODE :

BCCL - □□□□ E1 - □□□ □
 (1) (2) (3) (4) (5)

(1) Product Code

(2) Size Code

(3) Material Code

(4) Inductance

(5) Tolerance

(M:±20%, N:±30%)

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Part Number	Inductance	L Test Freq.	DC Resistance		Min. Self-resonant Frequency	Saturation Current Typ.	Heat Rating Current Max.	Thickness
Units	μH	MHz	mΩ		MHz	mA	mA	mm [inch]
Symbol	L	Freq.	DCR		S.R.F	Isat	Irms	T
			Typ.	Max.				
BCCL-2016E1-R47□	0.47	1	80	100	100	1600	1500	0.9±0.1 [.035±.004]
BCCL-2016E1-1R0□	1.0	1	90	112	70	1200	1400	
BCCL-2016E1-1R5□	1.5	1	110	137	60	700	1200	
BCCL-2016E1-2R2□	2.2	1	110	137	50	500	1200	
BCCL-2016E1-3R3□	3.3	1	120	150	40	330	1200	
BCCL-2016E1-4R7□	4.7	1	140	175	30	220	1100	

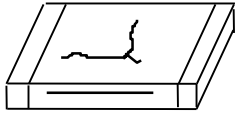
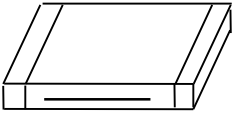

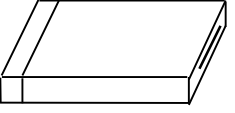
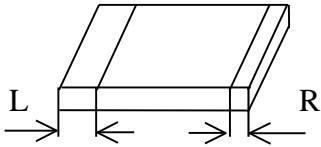
FINISHED PRODUCT INSPECTIONS

Inspection Item	Sampling Plan	AQL	Inspection Equipment
L/Z	MIL-STD-105E LII (Normal Inspection)	0.1	HP4291B
Q	MIL-STD-105E LII (Normal Inspection)	0.1	
DCR	MIL-STD-105E LII (Normal Inspection)	0.015	HP4338A/B
OPEN	Qty.×10%	C=	HP4338A/B
Dimension	n=20	C=	Calipers
Appearance	MIL-STD-105E LII (Normal Inspection)	0.1	Inspection Machine 8X/50X Magnifier 100X Microscope

TAPE & REEL INSPECTIONS

Inspection Item	Sampling Plan	AQL	Inspection Equipment
Peeling Force	One Reel Per Lot	C=0	Peeling Force Tester
Reel(Quantity)	Full Inspection	C=	Visual
P/N Label	Full Inspection	C=0	Visual

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Defect Description	Standard	Example
CRACK	NOT ALLOWED	
INTERAL ELECTRODE EXTRUSION	NOT ALLOWED	
CERAMIC EXTRUSION	MAX: $C \leq W/4$	
NO TERMINAL	NOT ALLOWED	
TWO SIDE DIFFERENCE	MAX: $D \leq 0.13\text{mm}$ ($D=L-R$)	

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Packaging and Storage

1 Packaging

Tape Carrier Packaging:

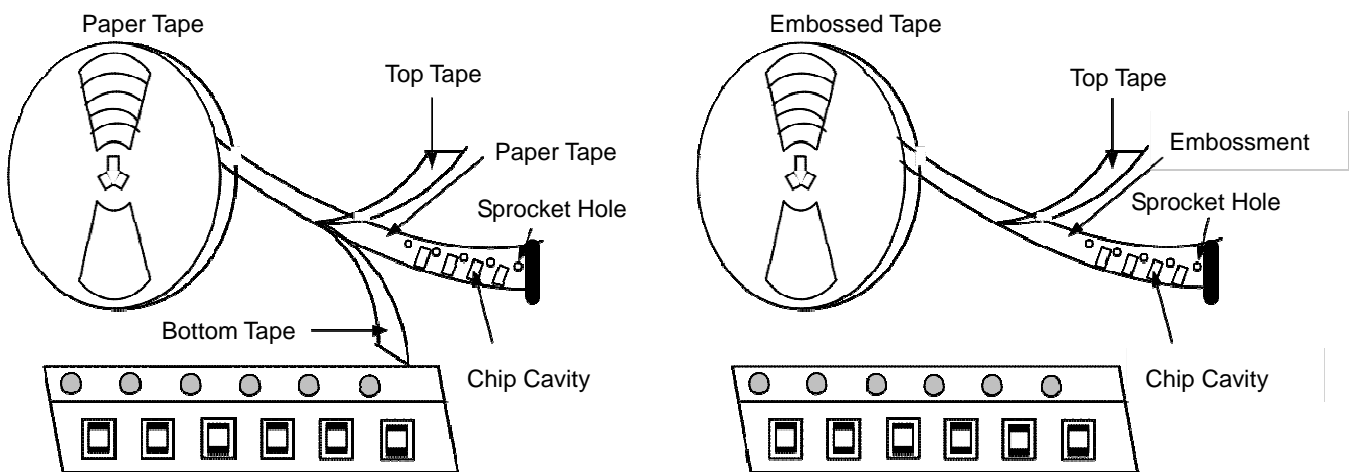
Packaging code: T

- a. Tape carrier packaging are specified in attached figure
- b. Tape carrier packaging quantity please see the following table:

Type	1608[0603]		2012[0805]			2016[0806]	2520[1008]	
T(mm)	0.5±0.1	0.8±0.15	0.5±0.1	0.9±0.1	1.25±0.2	0.9±0.1	0.9±0.1	1.1±0.1
Tape	Paper Tape	Paper Tape	Paper Tape	Embossed Tape	Embossed Tape	Embossed Tape	Embossed Tape	Embossed Tape
Quantity	5K	4K	5K	3K	3K	3K	3K	3K

- c. Reel shall be packaged in vinyl bag.
- d. Maximum of 5 or 10 reels bags shall be packaged in an inner box.
- e. Maximum of 6 or 10 inner boxes shall be packaged in an outer case.

(1) Taping Drawings (Unit: mm)



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Remark: The sprocket holes are to the right as the tape is pulled toward the user.

(2) Taping Dimensions (Unit: mm)

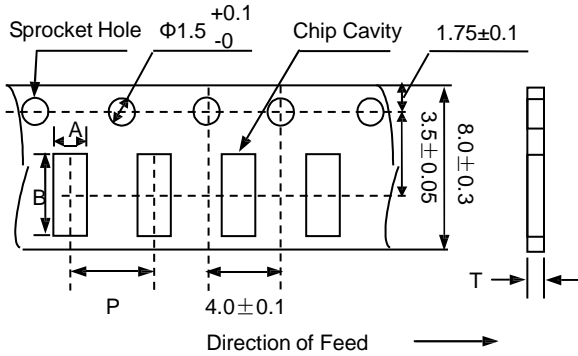


Fig 1-2

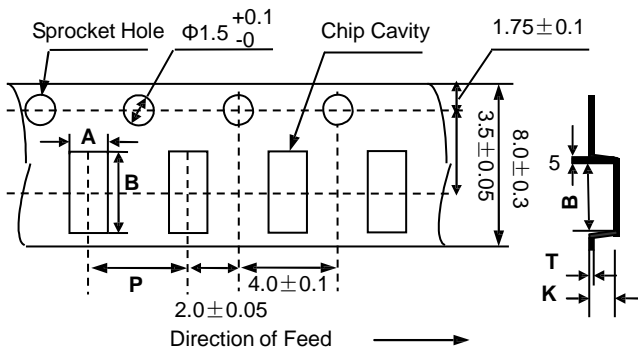


Fig. 1-3

(3) Reel Dimensions (Unit: mm)

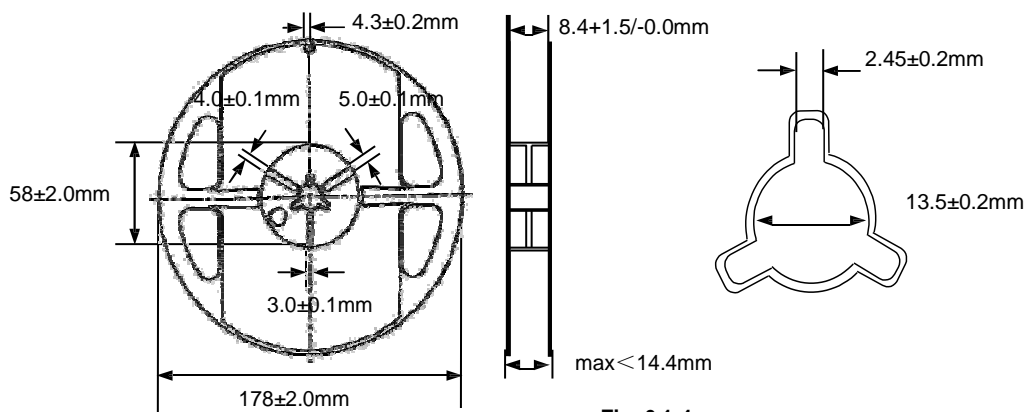


Fig. 6.1-4

Storage

- The solderability of the external electrode may be deteriorated if packages are stored where they are exposed to high humidity. Package must be stored at 40°C or less and 70% RH or less.
- The solderability of the external electrode may be deteriorated if packages are stored where they are exposed to dust of harmful gas (e.g. HCl, sulfurous gas of H₂S).
- Packaging material may be deformed if package are stored where they are exposed to heat of direct sunlight.

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RELIABILITY AND TEST CONDITION

Stress	Performance	Test Condition
Leaching	The chip should not crack ; More than 90% of the terminal electrode should be covered with solder , free from defects, chip body should not exposed.	1.Solder: Alpha Sn100 2.Solder Temp: 260 ±5°C 3.Flux: Rosin 4.Dip time: 10 ±1 sec
Solderability 1 (IR Re-flow test)	1.Sn cover area need to over half thickness of chip 2.Chip shift distance under 50% of width 3.No short , open ,...etc defect symptom	1.Solder: M705-GRN360-K2-V Sn96.5/Ag3/Cu0.5 2.General:135/135/195/235°C 3.100% TIN:155/155/220/265°C
Solderability 2	More than 90% of the terminal electrode should be covered with new solder	1.Solder: Alpha Sn100 2.Solder Temp.:230 ±5°C 3.Flux: Rosin 4.Dip time: 4±1 sec
Terminal Strength	The terminal electrode should not break off nor the ferrite damaged	100505>0. 2kgt, 160808>0. 3kgt, 201209>0. 6kgt, 201212>0. 6kgt, 321611>1. 0kgt, 322513>1. 0kgt, 451616>1. 0kgt, 453215>1. 5kgt, CBA3216>1. 2kgt ; pulling time:30 ±5 sec
Bending Strength	The ferrite should not be damaged by force applied on the right	100505>0. 2kgf, 160808>0. 3kgf, 201209>1. 0kgf, 201212>1. 0kgf, 321611>2. 0kgf, 322513>2. 5kgf, 451616>2. 5kgf, 453215>2. 5kgf, CBA3216>2. 0kgf
Flexure Strength	No mechanical damage shall be noticed even when the board is bent 2 mm (0.079 inches)	1.At ambient temperature & Humidity 2.To bend 2 mm
Thermal Shock	1.No mechanical damage 2.Inductance should be within ±5% of the initial value 3.Q value should be within ±30% of the initial value 4.Impedance value should be	1.Temperature:-40 ~ 85°C For 30 minutes each 2.Cycle: 100 cycles 3.Measurement: At ambient temperature 24 hours After test completion

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	within $\pm 20\%$ of the initial value	
Temperature Cycling	<ol style="list-style-type: none"> 1.No mechanical damage 2.Inductance should be within $\pm 5\%$ of the initial value 3.Q value should be within $\pm 30\%$ of the initial value 4.Impedance value should be within $\pm 20\%$ of the initial value 	<ol style="list-style-type: none"> 1. Temperature:-40~125 °C 2. Cycle: 100 cycles 3. Measurement: At ambient temperature 24 hours After test completion
Biased Humidity	<ol style="list-style-type: none"> 1.No mechanical damage 2.Inductance should be within $\pm 5\%$ of the initial value 3.Q value should be within $\pm 30\%$ of the initial value 4.Impedance value should be within $\pm 20\%$ of the initial value 	<ol style="list-style-type: none"> 1. Temperature: 40°C 2. Humidity: 85 % RH 3. Applied current: Full rated current 4. Testing time: 1000 hrs 5. Measurement: At ambient temperature 24 hours After test completion
Rated Current	<ol style="list-style-type: none"> 1. CB / CL / CLH product Surface temperature below room temperature plus 10 °C 2. High current DC power (ES) product surface temp. below room temperature plus 40 °C 	<ol style="list-style-type: none"> 1. At ambient temperature & humidity 2. Testing time: 5 minutes (under full rated current)