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Digi-Key

納 入 仕 様 書
PRODUCT SPECIFICATION FOR INFORMATION

製品名称 Product Description	: Voltage step-up coil
製品品番 Product Part Number	: ELT3KN128B,104B,121B,123B,131B,118B,124B
松下品番 Matsushita Part Number	: ELT3KN128B,104B,121B,123B,131B,118B,124B
適用(使用機種等) Applications	:

上記以外の適用に際しては,事前に弊社担当者までご連絡ください。
For other applications,contact our person signed below.

製造部署 Manufactured by	: Tajima Matsushita Electic Co.,Ltd
本仕様書の有効期間 Term of Validity	: 発行日から 2005年 10月 02日 まで有効とします。 October 02,2005 from the date of issue

お得意様ご使用欄 CUSTOMER USE ONLY

この書類を確かに受領しました。
This was certainly received by us.

松下電子部品株式会社
変成器事業部
Matsushita Electronic Components Co.,Ltd.
Power Supply And Inductive Products Division

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発行部署名 Prepared by
但馬松下電器株式会社
Tajima Matsushita Electric Co., Ltd.
Tel (0796)52-3181
Fax (0796)52-5706

責任者 Approved	検印 Checked	担当者 Designed
T. Yoshizaki	S. Morimoto	H. Baba

1. この製品の使用材料は、「化学物質の審査及び製造等の規制に関する法律」に基き、すべて既存化学物質として記載されている材料です。

All the materials used in this product are registered material under the Law Concerning the Examination and Regulation of Manufacture, etc. of Chemical Substances.

2. 本製品は、モントリオール議定書で規制されているオゾン層破壊物質(ODC)を製造工程及び購入部品・材料で一切使用していません。

This product has not been manufactured with any ozone depleting chemical controlled under the Montreal Protocol.

3. この製品に使用している全ての材料には、臭素系特定難燃物質「PBBOs、PBBs」を含有しておりません。

All the materials used in this product contain no brominated materials of PBBOs or PBBs as the flame-retardant.

4. 納入仕様書の「有効期間」について
有効期間は、特に、申し出のない限り(お客様の要望を含み)自動更新とします。
その際、連絡書・仕様書は、発行致しません。

"The Term of Validity" of Product Specifications for Information
Unless otherwise requested (including from customer), the term of validity shall be renewed automatically.
Then , informations and specifications shall be not issued.

SPECIFICATIONS

151-ELT3KN128B (R-0)

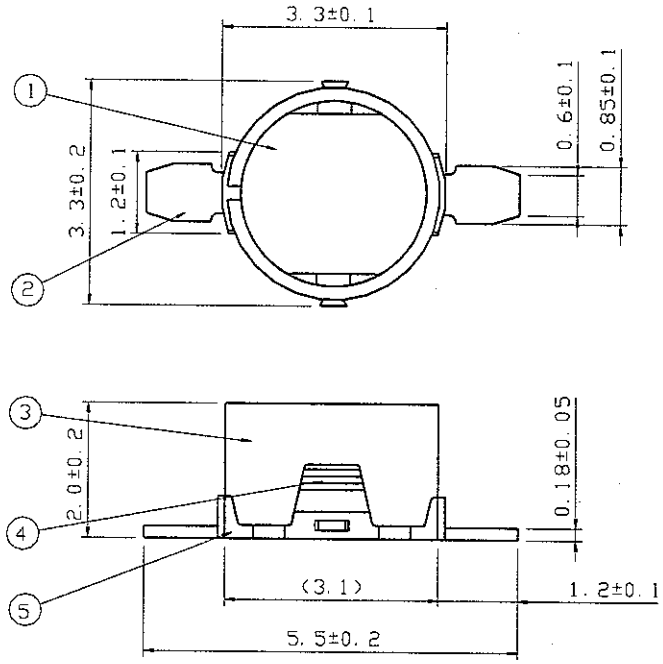
Name

FIXED INDUCTOR (VOLTAGE STEP-UP COIL)

1－1

Customer's No.	Matsushita's No.	Tentative No.
ELT3KN128B	ELT3KN128B	SLT3KN1140

1. APPEARANCE AND DIMENSIONS (Unit:mm)



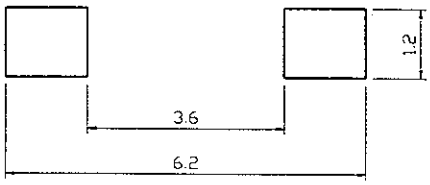
	PART NAME	MATERIAL
1	Core	Ferrite
2	Terminal	Cu_Ni_Sn alloy
3	Ring	Cu_Ni_Sn alloy
4	Coil	Polyurethan Enameled Copper Wire
5	Board	Liquid crystal polyester

[WINDING SPEC]

Type of wire 3UEWH-φ0.034

Number of turns 185.5T

[MOUNTING DETAILS]



2. ELECTRICAL CHARACTERISTICS

Operating Temperature	−20～+85℃
Inductance	560.0μH ± 10% (at 1 kHz)
DC Resistance	15.0 Ω ± 15% (at 25 ℃)
Rated Current	45.0mA

3. INDUCTANCE MEASUREMENT METHOD (by LCR METER:YHP4262A)

1. Measurement Frequency:1[kHz]
2. Circuit Mode:Series
3. Inductance Measurement Range

Measurement Range	~~100μH~~	1000μH	~~10mH~~	~~100mH~~
OSC Level	~~40mA~~	10mA	~~1mA~~	~~100μA~~

No.	Date	Revisions	Checked

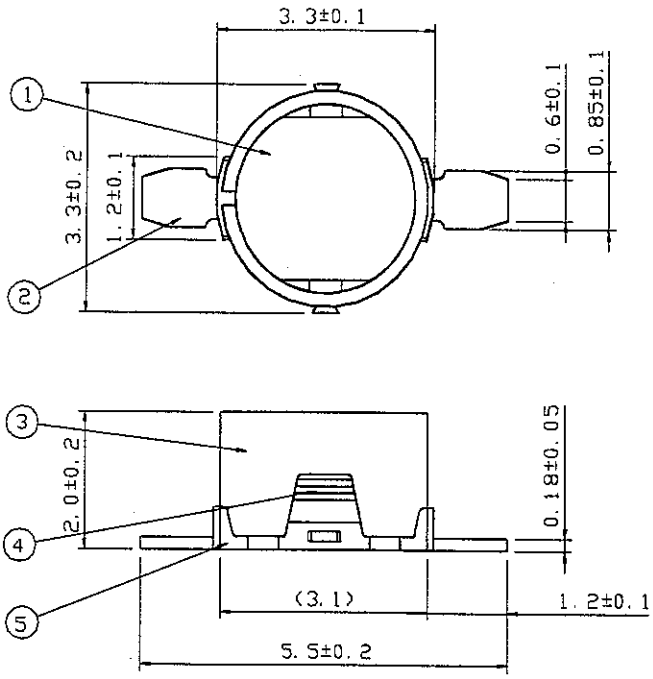
[Notes]
Item No.4 and No.5 depends on common spec.
(No.151-ELT3KN04)

DATE ESTABLISHED: 27. Oct. '99

Approved	Checked	Designed
K. Yoshizawa	Y. Nakajima	H. Baba

SPECIFICATIONS	151-ELT3KN104B (R-0)
Name: FIXED INDUCTOR (VOLTAGE STEP-UP COIL)	1－1
Customer's No.: ELT3KN104B	Matsushita's No.: ELT3KN104B / Tentative No.:

1. APPEARANCE AND DIMENSIONS (Unit:mm)



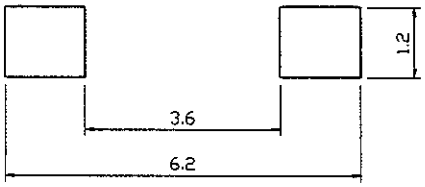
	PART NAME	MATERIAL
1	Core	Ferrite
2	Terminal	Cu_Ni_Sn alloy
3	Ring	Cu_Ni_Sn alloy
4	Coil	Polyurethan Enameled Copper Wire
5	Board	Liquid crystal polyester

[WINDING SPEC]

Type of wire 2UEWH-φ0.030

Number of turns 265.5T

[MOUNTING DETAILS]



2. ELECTRICAL CHARACTERISTICS

Operating Temperature	－２０～＋８５℃
Inductance	１．０ｍＨ ± １０％ (at 1 kHz)
DC Resistance	３５．０ Ω ± １５％ (at 25 ℃)
Rated Current	３０．０ｍＡ

3. INDUCTANCE MEASUREMENT METHOD (by LCR METER:YHP4262A)

1. Measurement Frequency:1[kHz]
2. Circuit Mode:Series
3. Inductance Measurement Range

Measurement Range	~~１００μＨ~~	~~１０００μＨ~~	１０ｍＨ	~~１００ｍＨ~~
OSC Level	~~４０ｍＡ~~	~~１０ｍＡ~~	１ｍＡ	~~１００μＡ~~

No.	Date	Revisions	Checked

[Notes]
Item No.4 and No.5 depends on common spec.
(No.151-ELT3KN04)

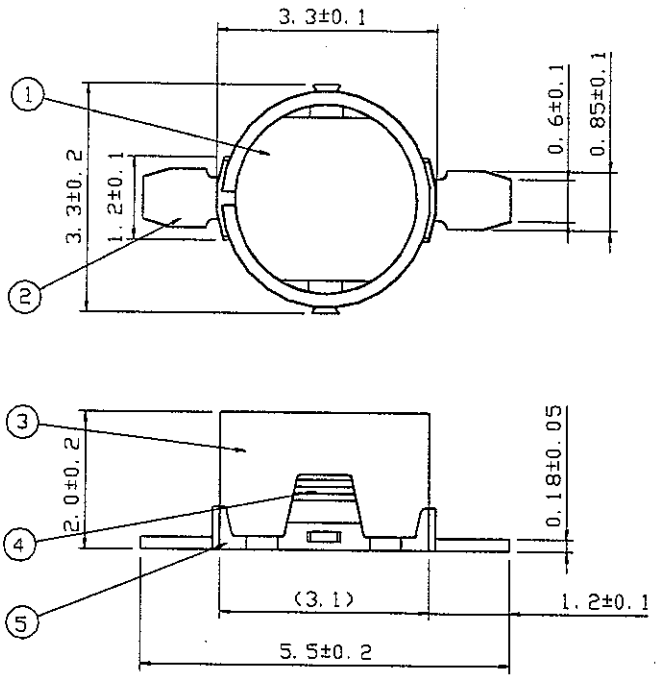
DATE ESTABLISHED: ３．Ｏｃｔ．'００

Approved	Checked	Designed
T. Yoshizawa	S. Moriwaki	H. Baba

SPECIFICATIONS	151-ELT3KN121B (R-0)
Name: FIXED INDUCTOR (VOLTAGE STEP-UP COIL)	1－1

Customer's No.	Matsushita's No.	Tentative No.
ELT3KN121B	ELT3KN121B	

1. APPEARANCE AND DIMENSIONS (Unit:mm)



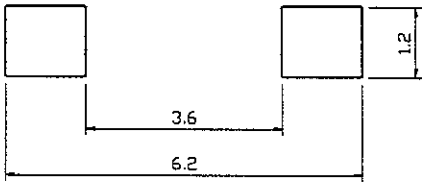
	PART NAME	MATERIAL
1	Core	Ferrite
2	Terminal	Cu_Ni_Sn alloy
3	Ring	Cu_Ni_Sn alloy
4	Coil	Polyurethan Enameled Copper Wire
5	Board	Liquid crystal polyester

[WINDING SPEC]

Type of wire 3UEWH-φ0.034

Number of turns 288.5T

[MOUNTING DETAILS]



2. ELECTRICAL CHARACTERISTICS

Operating Temperature	－20～＋85℃
Inductance	1.0mH ± 10% (at 1 kHz)
DC Resistance	22.5 Ω ± 15% (at 25 ℃)
Rated Current	40.0mA

3. INDUCTANCE MEASUREMENT METHOD (by LCR METER:YHP4262A)

1. Measurement Frequency:1[kHz]
2. Circuit Mode:Series
3. Inductance Measurement Range

Measurement Range	~~100μH~~	~~1000μH~~	10mH	~~100mH~~
OSC Level	~~40mA~~	~~10mA~~	1mA	~~100μA~~

No.	Date	Revisions	Checked

[Notes]
Item No.4 and No.5 depends on common spec.
(No.151-ELT3KN04)

DATE ESTABLISHED: 3. Oct.'00

Approved	Checked	Designed
T. Yoshizawa	S. Morimoto	H. Baba

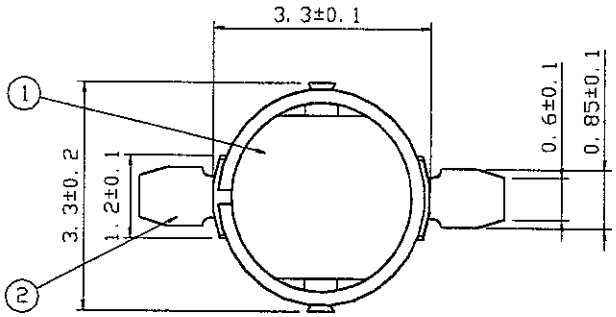
SPECIFICATIONS

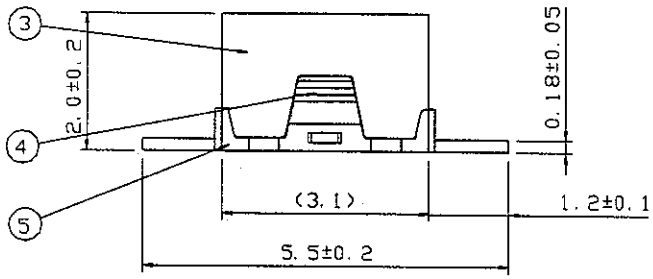
151-ELT3KN123B (R-0)

Name	
FIXED INDUCTOR (VOLTAGE STEP-UP COIL)	1－1

Customer's No.	Matsushita's No.	Tentative No.
ELT3KN123B	ELT3KN123B	

1. APPEARANCE AND DIMENSIONS (Unit:mm)





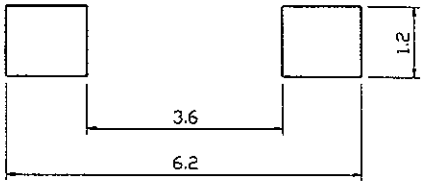
	PART NAME	MATERIAL
1	Core	Ferrite
2	Terminal	Cu_Ni_Sn alloy
3	Ring	Cu_Ni_Sn alloy
4	Coil	Polyurethan Enameled Copper Wire
5	Board	Liquid crystal polyester

[WINDING SPEC]

Type of wire 3UEWH-φ0.034

Number of turns 261.5T

[MOUNTING DETAILS]



2. ELECTRICAL CHARACTERISTICS

Operating Temperature	－２０～＋８５℃
Inductance	１．０ｍＨ ± １０％ (at １ kHz)
DC Resistance	２５．０ Ω ± １５％ (at 25 ℃)
Rated Current	３０．０ｍＡ

3. INDUCTANCE MEASUREMENT METHOD (by LCR METER:YHP4262A)

1. Measurement Frequency:1[kHz]
2. Circuit Mode:Series
3. Inductance Measurement Range

Measurement Range	~~１００μＨ~~	~~１０００μＨ~~	１０ｍＨ	~~１００ｍＨ~~
OSC Level	~~４０ｍＡ~~	~~１０ｍＡ~~	１ｍＡ	~~１００μＡ~~

No.	Date	Revisions	Checked

[Notes]
Item No.4 and No.5 depends on common spec.
(No.151-ELT3KN04)

DATE ESTABLISHED: 3. Oct.'00

Approved	Checked	Designed
T. Yoshiyama	S. Morimoto	A. Baba

SPECIFICATIONS

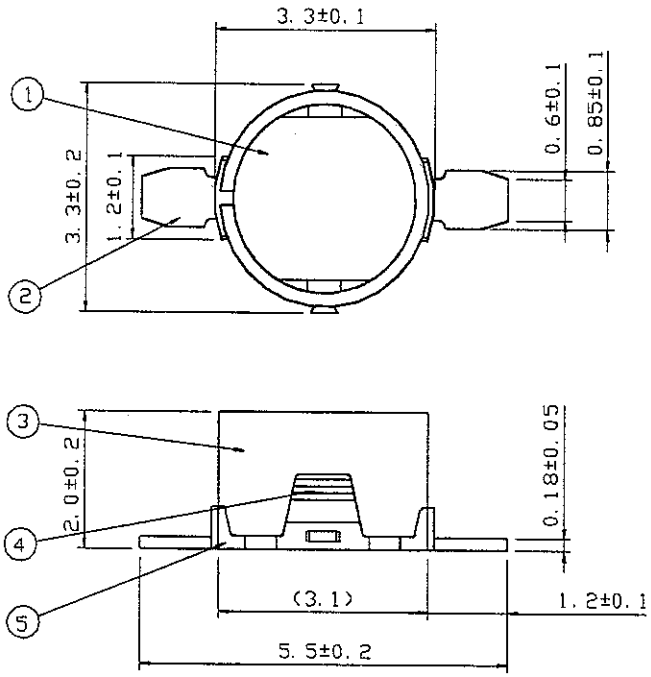
151-ELT3KN131B (R-0)

Name: FIXED INDUCTOR (VOLTAGE STEP-UP COIL)

1－1

Customer's No.	Matsushita's No.	Tentative No.
ELT3KN131B	ELT3KN131B	

1. APPEARANCE AND DIMENSIONS (Unit:mm)



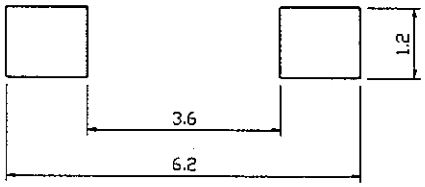
	PART NAME	MATERIAL
1	Core	Ferrite
2	Terminal	Cu_Ni_Sn alloy
3	Ring	Cu_Ni_Sn alloy
4	Coil	Polyurethan Enameled Copper Wire
5	Board	Liquid crystal polyester

[WINDING SPEC]

Type of wire 3UEWH-φ0.030

Number of turns 365.5T

[MOUNTING DETAILS]



2. ELECTRICAL CHARACTERISTICS

Operating Temperature	－２０～＋８５℃
Inductance	２．０ｍＨ ± １０％ (at １ kHz)
DC Resistance	４４．０ Ω ± １５％ (at 25 ℃)
Rated Current	２０．０ｍＡ

3. INDUCTANCE MEASUREMENT METHOD (by LCR METER:YHP4262A)

1. Measurement Frequency:1[kHz]
2. Circuit Mode:Series
3. Inductance Measurement Range

Measurement Range	~~１００μＨ~~	~~１０００μＨ~~	１０ｍＨ	~~１００ｍＨ~~
OSC Level	~~４０ｍＡ~~	~~１０ｍＡ~~	１ｍＡ	~~１００μＡ~~

No.	Date	Revisions	Checked

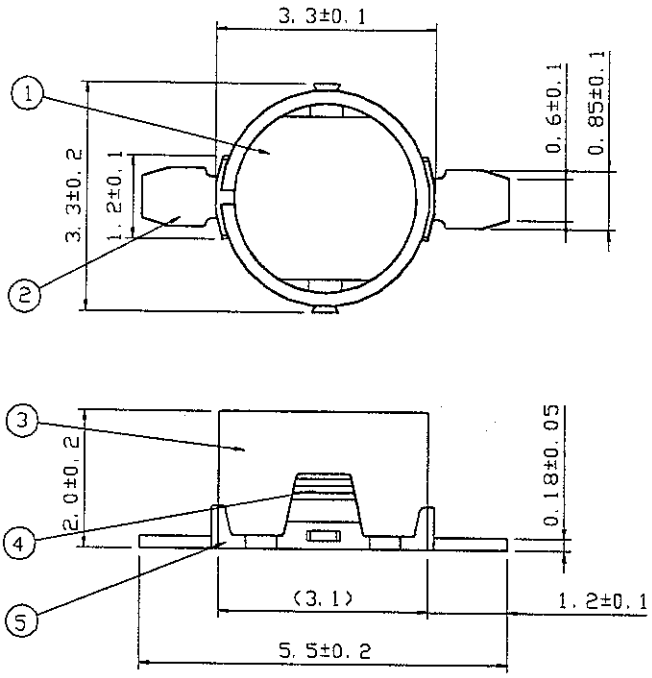
[Notes]
Item No.4 and No.5 depends on common spec.
(No.151-ELT3KN04)

DATE ESTABLISHED: 3. Oct.'00

Approved	Checked	Designed
T. Yoshizumi, Moriwaki		H. Baba

SPECIFICATIONS	151-ELT3KN118B (R-0)
Name: FIXED INDUCTOR (VOLTAGE STEP-UP COIL)	1－1
Customer's No.: ELT3KN118B	Matsushita's No.: ELT3KN118B / Tentative No.:

1. APPEARANCE AND DIMENSIONS (Unit:mm)



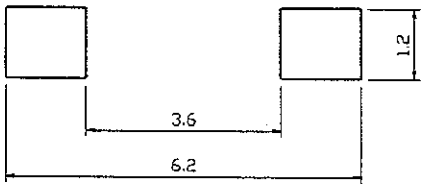
	PART NAME	MATERIAL
1	Core	Ferrite
2	Terminal	Cu_Ni_Sn alloy
3	Ring	Cu_Ni_Sn alloy
4	Coil	Polyurethan Enameled Copper Wire
5	Board	Liquid crystal polyester

[WINDING SPEC]

Type of wire 3UEWH-φ0.026

Number of turns 410.5T

[MOUNTING DETAILS]



2. ELECTRICAL CHARACTERISTICS

Operating Temperature	－２０～＋８５℃
Inductance	２．５ｍＨ ± １０％ (at １ kHz)
DC Resistance	６４．０ Ω ± １５％ (at ２５ ℃)
Rated Current	２０．０ｍＡ

3. INDUCTANCE MEASUREMENT METHOD (by LCR METER:YHP4262A)

1. Measurement Frequency:1[kHz]
2. Circuit Mode:Series
3. Inductance Measurement Range

Measurement Range	~~１００μＨ~~	~~１０００μＨ~~	１０ｍＨ	~~１００ｍＨ~~
OSC Level	~~４０ｍＡ~~	~~１０ｍＡ~~	１ｍＡ	~~１００μＡ~~

No.	Date	Revisions	Checked

[Notes]
Item No.4 and No.5 depends on common spec.
(No.151-ELT3KN04)

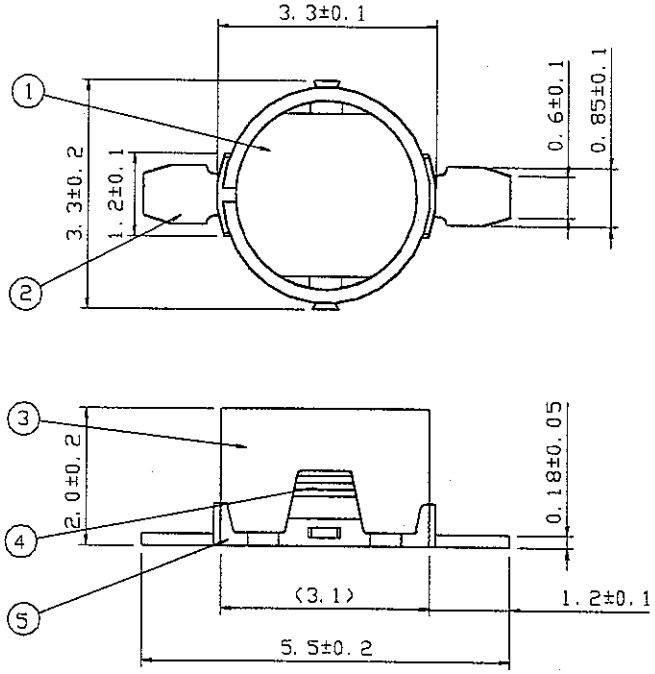
DATE ESTABLISHED: 3. Oct.'00

Approved	Checked	Designed
T. Yoshizawa	H. Ito	H. Baba

SPECIFICATIONS	151-ELT3KN124B (R-0)
Name FIXED INDUCTOR (VOLTAGE STEP-UP COIL)	1－1

Customer's No.	Matsushita's No.	Tentative No.
ELT3KN124B	ELT3KN124B	

1. APPEARANCE AND DIMENSIONS (Unit:mm)



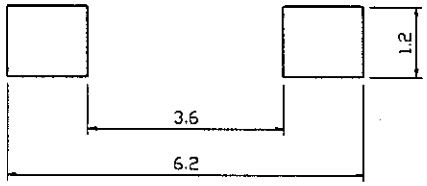
	PART NAME	MATERIAL
1	Core	Ferrite
2	Terminal	Cu_Ni_Sn alloy
3	Ring	Cu_Ni_Sn alloy
4	Coil	Polyurethan Enameled Copper Wire
5	Board	Liquid crystal polyester

[WINDING SPEC]

Type of wire 3UEWH-φ0.026

Number of turns 522.5T

[MOUNTING DETAILS]



2. ELECTRICAL CHARACTERISTICS

Operating Temperature	−20～+85℃
Inductance	4.0mH ± 10% (at 1 kHz)
DC Resistance	85.0 Ω ± 15% (at 25 ℃)
Rated Current	15.0mA

3. INDUCTANCE MEASUREMENT METHOD (by LCR METER:YHP4262A)

1. Measurement Frequency:1[kHz]
2. Circuit Mode:Series
3. Inductance Measurement Range

Measurement Range	~~100μH~~	~~1000μH~~	10mH	~~100mH~~
OSC Level	~~40mA~~	~~10mA~~	1mA	~~100μA~~

No.	Date	Revisions	Checked

[Notes]
Item No.4 and No.5 depends on common spec.
(No.151-ELT3KN04)

DATE ESTABLISHED: 3. Oct.'00

Approved	Checked	Designed
T. Yoshizawa	S. Horiuchi	H. Baba

SPECIFICATIONS	151-ELT3KN04 (R-0)
Name FIXED INDUCTOR (VOLTAGE STEP-UP COIL)	4 − 1 − 1

4 RELIABILITY CHARACTERSTICS ITEM

ITEM	SPECIFICATION	TEST METHOD/CONDITION
TEMPERATURE CHARACTERISTICS	Inductance shall not change more than ±5%.	Inductors shall be subjected to -30℃,+25℃,+85℃ for 30min each. Standard:Values at 25℃
HUMIDITY CHARACTERISTICS	There shall not be case deformation or change in apperance. Inductance shall not change more than ±10%.	Inductors shall be subjected to 90～95%RH at 60±2℃ for 500±8 hours. Measurements shall be made after 2 hours stabilization at room temperature.
HEAT RESISTANCE		Inductors shall be subjected to 85±2℃ for 500±8 hours. Measurements shall be made after 2 hours stabilization at room temperature.
THERMAL SHOCK		Inductors shall be subjected to 100 times to the following temperature cycle. -40℃,+85℃(30min each)Measurements shall be made after 2 hours stabilization at room temoerature.
LOW TEMPERATURE STORAGE		Inductors shall be subjected to -40±2℃ for 500±8 hours. Measurements shall be made after 2 hours stabilization at room temperature.
DIELECTRIC WITHSTANDING VOLTAGE	There shall not be case deformation or change in apperance.	50V DC between the terminal and upper part of the core,lower part of the core for 5sec.
SOLDERABILITY	The terminals shall be as least 90% cover with solder.	After fluxing terminals shall be dipped in melted solder bath at 230±5℃ for 2±0.5sec.
RESISTANCE TO SOLDERING HEAT	There shall not be case deformation or change in apperance. Inductance shall not change more than ±10%.	Inductors shall be dipped in a melted solder bath at 280±5℃ for 10±0.5sec up to 0.5mm from attachment surface.
VIBRATION,LOW FREQUENCY	There shall not be case deformation or change in apperance. Inductance shall not change more than ±5%.	FREQUENCY:10～55Hz/PERIOD:60sec/AMPLITUDE:1.5mm Motion shall be applied for 20min in each of the 3 mutually perpendicular directions.

No.	Date	Revisions	Checked

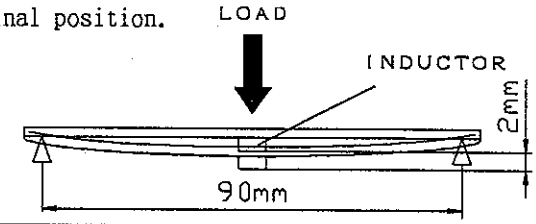
[Notes]

DATE ESTABLISHED : 16. Apr, '97

Approved	Checked	Designed
T.Yoshiyama	M.Tawara	H.Baba

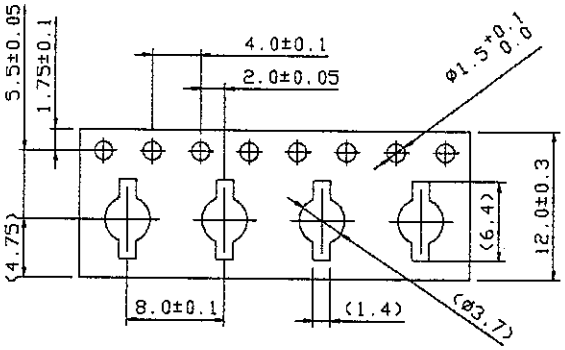
SPECIFICATIONS	151-ELT3KN04 (R-0)
Name FIXED INDUCTOR (VOLTAGE STEP-UP COIL)	4 − 1 − 2

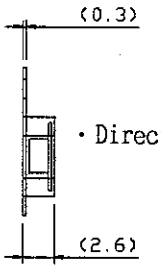
RELIABILITY CHARACTERSTICS ITEM

ITEM	SPECIFICATION	TEST METHOD/CONDITION
SHOCK	There shall not be case deformation or change in apperance and electrical characteristics.	Inductors shall be dropped 3 times from a height of 1m onto a wooden board. Inductors soldered on 50g weight jig shall be dropped 3 times from a height of 75cm onto a concrete. (attached test method) (But a test sample should not be brought into contact with a board directly.)
TERMINAL PULL STRENGTH	There shall not be case deformation or change in apperance.	A 6.5N load shall be applied to both terminals in the holizontal direction for 30sec±0.5sec.
SUBSTRATE BENDING	There shall not be case deformation or change in apperance. Inductance shall not change more than ±40%.	A load shall be applied to inductors soldered on a PCB till it is bent 2mm and then it returns to original position. 
RESISTANCE TO SOLVENTS	There shall not be case deformation or change in apperance.	Inductors shall be subjected to 1-1-1TRICHLOROETHANE for 5min. respectively

5 PACKAGING

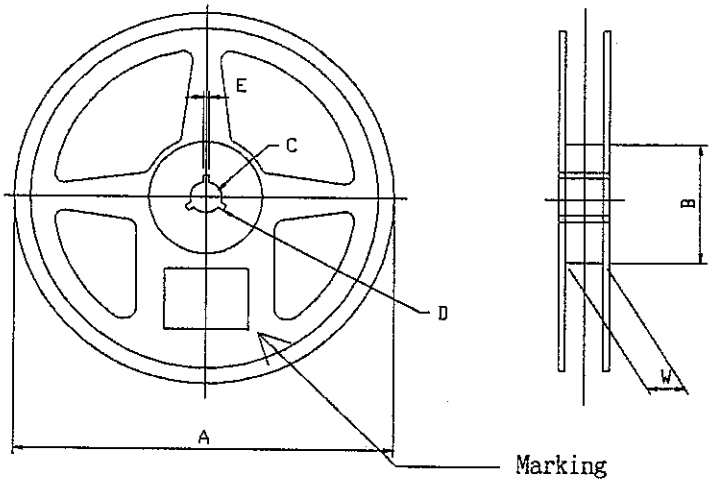
5-1 Carrier tape





・Direction of packaging

5-2 Reel



CODE	DIMENSION(mm)
A	φ178±0.2
B	φ50±0.5
C	φ13.0±0.5
D	φ21.0±0.8
E	2.0±0.5
W	13.0±0.3

Quantity : 1,000 pcs.

5-3 Marking

Part Name, customer's Part No., our Part No., quantity, manufacturer's name and product code shall be marked on the reel.

□ □ □
1 2 3

[1] YEAR : Last figure of year

[2] MONTH : Refer to details →

MONTH	1	2	3	4	5	6	7	8	9	10	11	12
CODE	1	2	3	4	5	6	7	8	9	O	N	D

[3] DAY : Refer to details →

D A Y	CODE
1～10	1
11～20	2
21～END	3

* Ex. 17 / Oct / 1994

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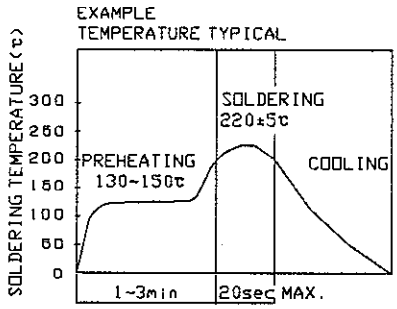
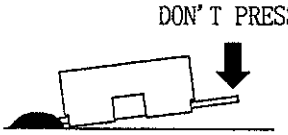
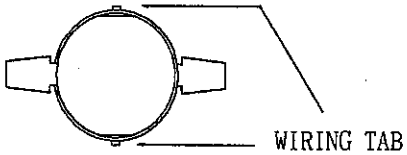
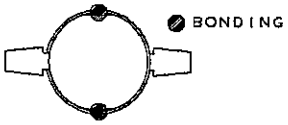
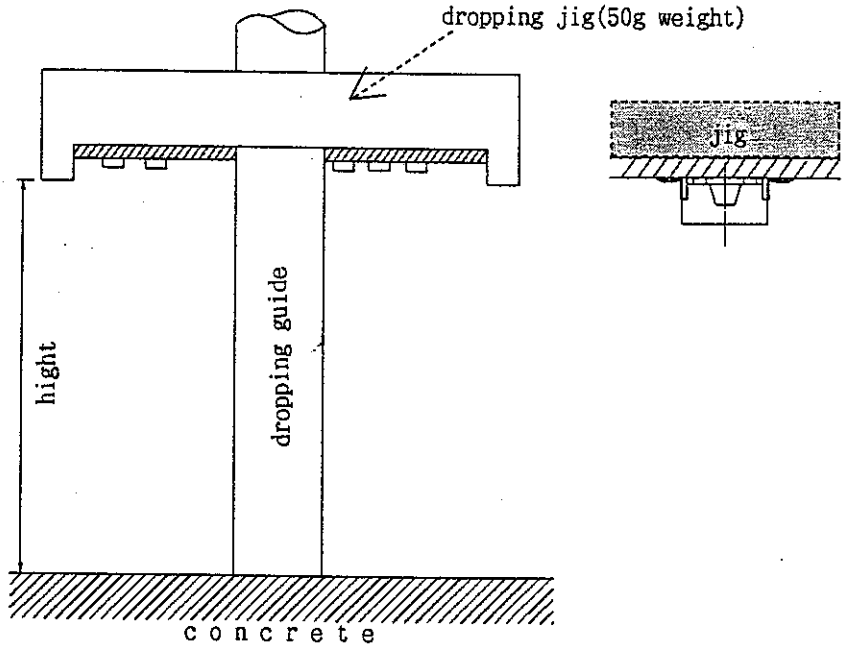
4 O 2

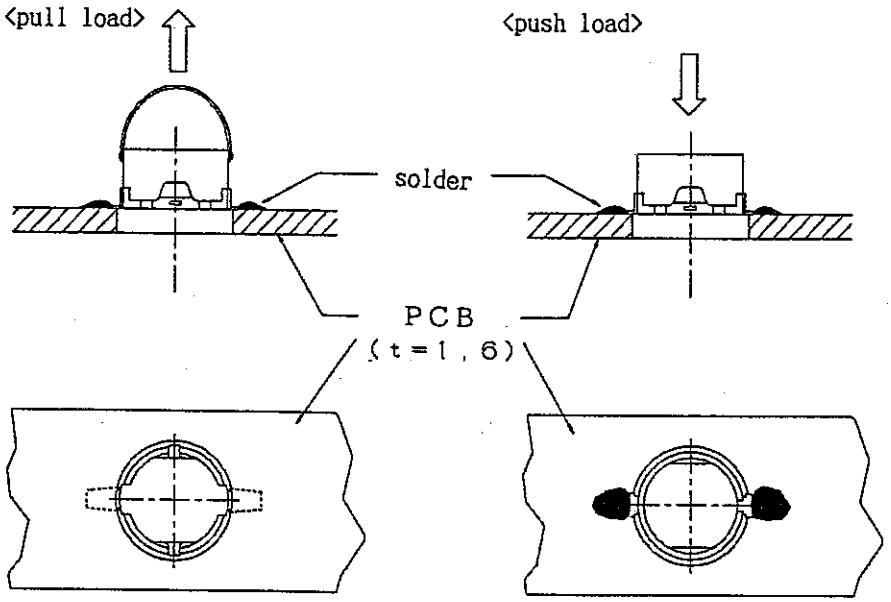
[PRECATIONS FOR USE OF FIXED INDUCTOR (VOLTAGE STEP-UP COIL)]

ITEM	CONTENS	REMARKS
SOLDERING	・ Infrared reflow soldering: This type of reflow soldering should be conducted for up to 20 seconds in electrode temperature range of 200℃ or more, and for no more than 5 seconds at peak temperature of 230℃. 	
RESOLDERING WITH A SOLDERING IRON	Resoldering should be done within 3 seconds by soldering iron, the temperature with 350℃ or less and should be cooling down after ward. Both side of terminals shall be fixed closely to PCB. And terminals shall not be pressed in heating.  The wiring tab shall not be held by sharp-edged tool.  Iron shall not be put to the component itself.	
MOUNTING SIDE	External force must be less than 4.9N : while mounting.	
CLEANING	If you clean the inductor, please use own your ultrasonic cleaning to check specified coditions.	
REINFORCEMENT	To fasten the component on the PCB, We recomend to use epoxy resin as below. 	
STORAGE CONDITIONS	The customer is requested to store the products at the normal temperature (-5℃ to 35℃) and the normal humidity (85% RH max.) in the packages we supplied. The pacage shall not be exposed to direct sunlight and harmful gas and care should be taken so as not to cause dew.	

1. TEST METHOD OF RESISTANCE BY DROPPING. (ATTACHED DRAWING)



2. TEST METHOD OF EXFOLIATION STRENGTH BETWEEN CORE AND TERMINAL BOARD. (ATTACHED DROWING)



A load shall be applied to inductors soldered on a PCB as above drawing.