

発行整理番号  
Issue NO. : T1LF-02054

発行日  
Date of Issue : 2002年4月24日  
April 24, 2002

発行区分  
Classification:  新規 New  変更 Change  更新 Renewal

**DIGI-KEY**

## 納入仕様書

### PRODUCT SPECIFICATION FOR INFORMATION

製品名称  
Product Description : Line Filter

製品品番  
Product Part Number : ELF18D4□□□

松下品番  
Matsushita Part Number : ELF18D4□□□

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 : JAPAN / CHINA / SINGAPORE / INDONESIA

本仕様書の有効期間  
Term of Validity : 発行日から 2007年4月23日 まで有効とします。  
April 23, 2007 from the date of issue

#### お客様ご使用欄 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  
LCRデバイスカンパニー  
コイルストラテジックビジネスユニット  
Matsushita Electronic Components Co.,Ltd.  
LCR Device Company  
Inductive Products Strategic Business Unit  
〒668-0298 兵庫県 出石郡出石町 田多地1番地  
1, Tadachi, Izushi, Hyogo, 668-0298 Japan  
電話(代表) (0796) 52-3181  
Tel (0796) 52-3181(Representative)

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
<i>S. Moriwa to</i>	<i>T. Oda</i>	<i>T. Inoi</i>

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」に基づき、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」を含有していません。

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

( R 0 )

151-ELF18D412

Name **LINE FILTER**

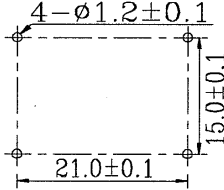
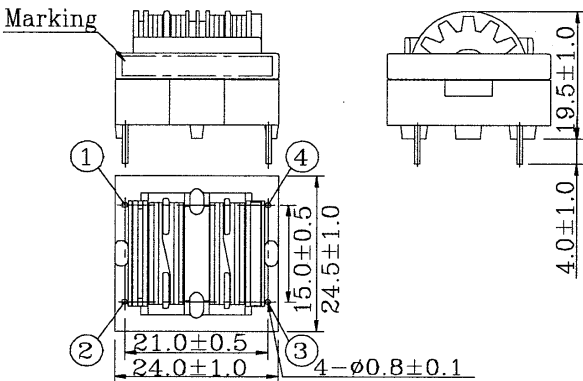
Customer's No **ELF18D4□□□** Matsushita Code **ELF18D4□□□**

1 - 2

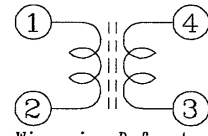
**APPEARANCE & DIMENSIONS ( Unit : mm )**

**MOUNTING DETAILS**

**APPLICABLE SAFTY STANDERD (Reference )**



**CONNECTIONS**



Wire type · Wire size: Refer to each SPEC  
( 151-ELF18D412 ( 2-2 ) )

- E.A.M.S Law of Japan (DENKI YOHIN)
- UL 1270, 1409, 1410, 1492, 1950, 6500
- IEC 60065, 60950
- CSA C22.2 Na1, Na950

**INSULATION DISTANCE**

- Bobbin Thickness 0.8mm min.
- Base Thickness 0.7mm min.
- Space & Creepage Distance
- Between Coil & Coil 3.2mm min.
- Between Coil & Core 2.0mm min.

**ELECTRICAL CHARACTERISTICS**

- Operating Temperature Range : - 20 to 105 °C ( Including Self-Temperature-Rise )
- Inductance ( L1 & L2 ) : Refer to each Specifications ( 151-ELF18D412 ( 2-2 ) )
- L1 & L2 Difference ( |L1-L2| ) : Refer to each Specifications ( 151-ELF18D412 ( 2-2 ) )
- DC Resistance ( RDC ) : Refer to each Specifications ( 151-ELF18D412 ( 2-2 ) )
- Rated Current ( Ir ) : Refer to each Specifications ( 151-ELF18D412 ( 2-2 ) )
- Rated Voltage : 250 V [ rms ] max. ( 50Hz, 60Hz )
- Temperature-Rise : 45 Kmax. ( Passing Ir for 3±1h )
- Insulation Resistance ( IR ) : 100MΩ min. ( at DC500V between Coil & Coil and Coil & Core. )
- Withstanding Voltage : Shall withstand AC2000V for 1 minute applied between Coil & Coil and Coil & Core.  
(For manufacture line , apply 120% of specified Voltage for 2 seconds instead of above conditions)
- Moisture Life : Appearance, Structure and Withstanding Voltage shall not be remarkably damaged after stored for 500±6 hours of exposure to 90 to 95% RH at 60±2°C with AC250V loaded between Coil and Coil and left for 1 hour in room conditions.
- Heat Life : Appearance, Structure and Withstanding Voltage shall not be remarkably damaged after stored for 500±6 hours at 85±2°C with AC250V loaded between Coil and Coil and left for 1 hour in room conditions.
- Thermal Shock : Appearance, Structure and Withstanding Voltage shall not be remarkably damaged after 5 cycles of storage at -25±3°C for 30 minutes and 85±2°C for 30 minutes left for 1 hour in room conditions.
- Cold Resistances : Appearance, Structure and Withstanding Voltage shall not be remarkably damaged after stored for 96±4 hours at -25±3°C and left for 1 hour in room conditions.
- Heat Resistance : Change of inductance shall be within ±15% and Appearance, Structure and Withstanding Voltage shall not be remarkably damaged after stored for 96±4 hours at 85±2°C and left for 1 hour in room conditions.
- Moisture Resistance : Change of inductance shall be within ±15% and Appearance, Structure and Withstanding Voltage shall not be remarkably damaged after stored for 96±4 hours exposure to 90 to 95% RH at 60±2°C and left for 1 hour in room conditions.

**MECHANICAL CHARACTERISTICS**

- Vibration Resistance : Appearance and Structure shall have no abnormality after vibration at the frequency varying uniformly between the approximate limits of 10 and 55 Hz and the amplitude of 1.5 mm for 2 hours in each of 3 mutually perpendicular directions.
- Terminal Strength : The terminal shall not be remarkably damaged by pulling and pushing of 10N {about 1.02kgf} for 30±5 seconds in the axis directions.
- Solderability : Solder shall be attached uniformly around the dipped portion after dipping into solder at 230±5°C for 2±0.5 seconds.
- Solder Heat Resistance: The electrical and mechanical characteristics shall not be deteriorated after dipping into solder at 270±5°C for 5±0.5 seconds up to 1.0 to 1.5 mm from attachment surface.

**MARKING**

- Product : Customer's Code ( Refer to each SPEC ) , Date Code of manufacture and Trade Mark ( ⊗ Mark ) shall be indicated.
- Packing : Part Name , Product Code , Quantity and Specified Item shall be indicated.

**CAUTION**

The dropped product shall not be used. Do not input DC-bias to the product.  
There is a risk of safety trouble due to a smoking or deformation if this product is used under the abnormal condition :  
at 2 times of rated current in 2 minutes.

Apr.24.2002

No.	Date	Revisions	Checked	Designed	Approved	Checked	Designed

*S. Morimoto*     *T. Oda*     *T. Inui*

# SPECIFICATIONS

( R O )  
151-ELF18D412

Name

## LINE FILTER

Customer's No

Matsushita Code

ELF18D4□□□

ELF18D4□□□

2 - 2

※ H Series #400 Type

Customer's No.	Matsushita Code	Marking	L1&L2	L1&L2 Difference	DCR Resistance Ω (Tolerance±20%) ( at 20°C )	Rated Current A[rms] [ 50Hz 60Hz]	Reference		Remarks
			mH min.	μH max.			Wire size	Turns	
			f=1kHz Vosc(rms)=0.1V				φ mm	2UEW	
ELF18D428	ELF18D428	ELF428	33.00	500	1.184	0.5	0.30	136	
ELF18D423	ELF18D423	ELF423	27.00	600	1.136	0.6	0.32	142	
ELF18D422	ELF18D422	ELF422	22.00	600	0.987	0.6	0.32	128	
ELF18D417	ELF18D417	ELF417	18.00	500	0.700	0.7	0.35	112	
ELF18D430	ELF18D430	ELF430	12.00	400	0.595	0.9	0.35	96	
ELF18D415	ELF18D415	ELF415	8.20	300	0.374	1.0	0.40	78	
ELF18D412	ELF18D412	ELF412	6.80	300	0.290	1.2	0.45	40	
ELF18D424	ELF18D424	ELF424	5.60	300	0.260	1.3	0.45	66	
ELF18D433	ELF18D433	ELF433	3.90	300	0.176	1.5	0.50	54	
ELF18D414	ELF18D414	ELF414	3.30	200	0.138	1.8	0.55	50	
ELF18D416	ELF18D416	ELF416	2.20	200	0.109	2.0	0.55	42	
ELF18D419	ELF18D419	ELF419	1.50	150	0.076	2.4	0.60	34	
ELF18D437F	ELF18D437F	ELF437F	68.00	700	2.319	0.4	0.26	196	
ELF18D427F	ELF18D427F	ELF427F	39.00	500	1.332	0.5	0.30	148	
ELF18D417F	ELF18D417F	ELF417F	18.00	350	0.655	0.8	0.35	102	
ELF18D431F	ELF18D431F	ELF431F	10.00	250	0.384	1.0	0.40	76	
ELF18D424F	ELF18D424F	ELF424F	5.60	150	0.191	1.4	0.50	56	
ELF18D434F	ELF18D434F	ELF434F	2.70	100	0.111	2.0	0.55	40	
ELF18D435F	ELF18D435F	ELF435F	2.20	100	0.084	2.2	0.60	36	
ELF18D420F	ELF18D420F	ELF420F	1.20	100	0.043	3.0	0.70	26	
ELF18D441F	ELF18D441F	ELF441F	0.56	50	0.030	3.4	0.70	18	

Apr.24.2002

No.	Date	Revisions	Checked	Designed	Approved	Checked	Designed
					<i>S. Hamamoto</i>	<i>T. Oda</i>	<i>T. Iwii</i>

Classification

## SPECIFICATION (MATERIAL)

No.

151-ELF18D40M ( R 0 )

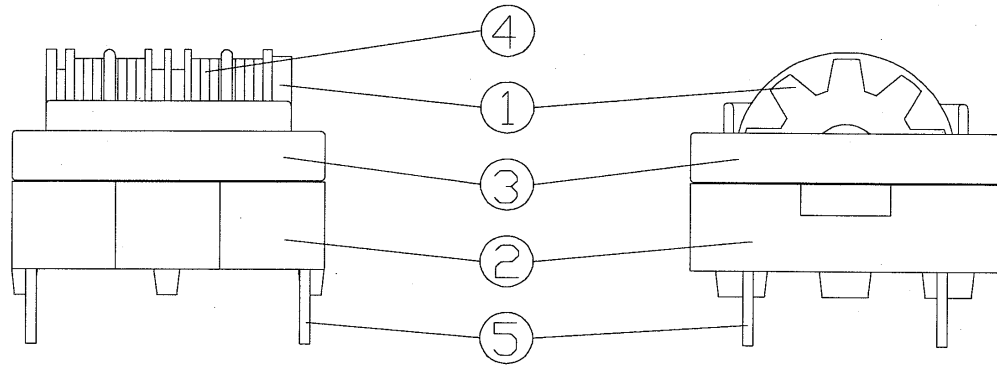
Subject

## LINE FILTER

Page 1 of 1

Date Jun.27.2001

## STRUCTURE



## MATERIAL LIST

ITEM	PART NAME	MATERIALS	MANUFACTURE
1	Bobbin	Polypropylene Resin ( 2527 V-0 E50955 )	CHISSO CORP.
2	Base	Phenolic Resin ( PM-8315 V-0 E41429 ) ( PM-9820 V-0 E41429 ) ( CY-9610 V-0 E41404 ) ( F5800F V-0 E46770 )	SUMITOMO BAKELITE CO.,LTD. SUMITOMO BAKELITE CO.,LTD. MATSUSHITA ELECTRIC WORKS LTD. FUDOW CO.,LTD.
3	Core	Ferrite	OPTIONAL
4	Wire	Polyurethane Enameled Copper Wire	DAIICHI DENKO CO.,LTD. RIKEN ELECTRIC WIRE CO.,LTD. TOTOKU ELECTRIC CO.,LTD. JUNGSHING WIRE CO.,LTD. SUMITOMO ELECTRIC INDUSTRIES LTD. SIAM ELECTRIC INDUSTRIES CO.,LTD. HITACHI CABLE LTD. etc.
5	Terminal	NLT Plating Copper-Ply-Wire	KYOWA ELECTRIC WIRE CO.,LTD.

## INSULATION DISTANCE

ITEM		DIMENSIONS
Bobbin Thickness		0.8 mm min.
Base Barrier Thickness		0.7 mm min.
Space or Creepage Distance	Between Coil and Core	2.0 mm min.
	Between Coil and Coil	3.2 mm min.

## WITHSTANDING VOLTAGE

ITEM	WITHSTAND VOLTAGE
Between Coil and Core	AC 2 kV min. for 1 minute.
Between Coil and Coil	

MATSUSHITA ELECTRONIC COMPONENTS CO.,LTD.

Approved

Checked

Design

T. Yoshizawa T. Oda K. Yokouchi

