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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Coil type EMI Filters (Digital Noise Filters)

Type: ELKE□



Features

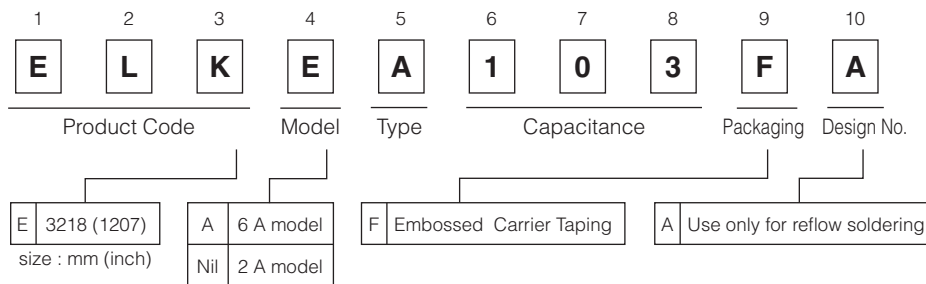
- 3218 case size, 6 A rated current (ELKEA) and 2 A rated current (ELKE)
- High ESD suppression with varistor and included coils
- No variation in attenuation characteristics due to current changes
- Easily discernible part number written by lasers
- RoHS compliant

Recommended Applications

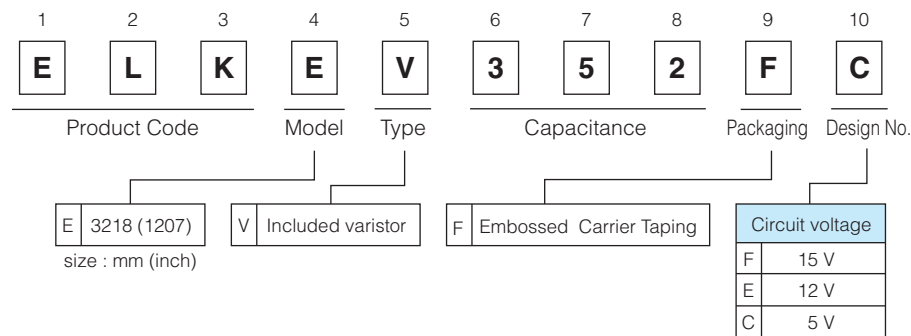
- Data lines, secondary power supply lines (DC lines) for game, digital AV and communications equipment.

Explanation of Part Numbers

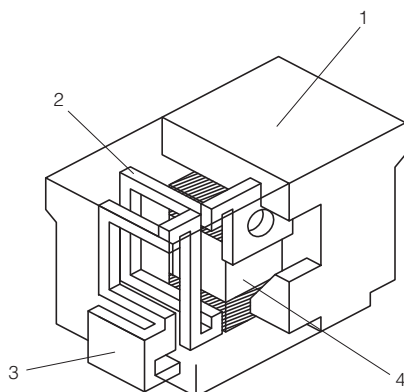
[ELKE, ELKEA Series]



[ELKEV Series]



Construction



| No. | Part Name | Material |
|-----|-----------|-------------------------------------|
| 1 | Enclosure | PPS resin mixed with ferrite powder |
| 2 | Coil | Copper alloy plate |
| 3 | Terminal | Copper alloy plate with SnCu |
| 4 | Capacitor | Chip capacitor |

Large Current Coil type EMI Filters (Digital Noise Filters) SMD



Type: **ELKEA**

Features

- 3218 case size, 6 A rated current
- No variation in attenuation characteristics due to current changes
- Easily discernible part number written by lasers
- RoHS compliant

Typical Specification

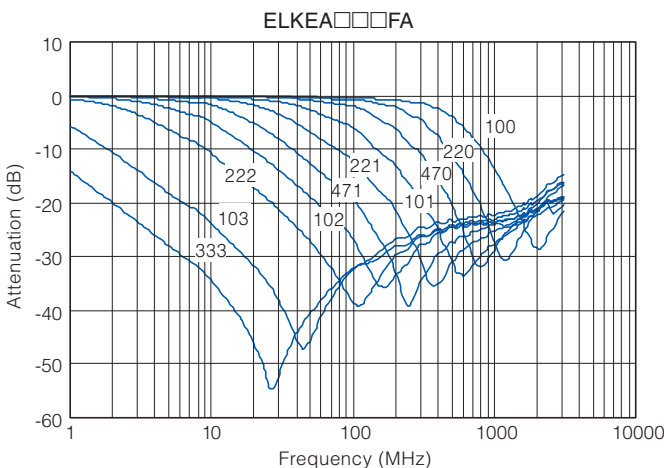
- Operating temperature : -40 to +85 °C
- Rated Voltage : DC 50 V (Except ELKEA333FA : DC25 V)
- Rated Current : DC 6 A

Standard Parts

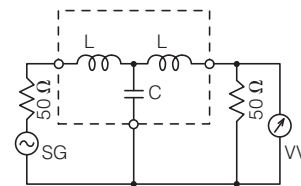
| Part No. | Cut off frequency (MHz) | Inner Capacitance (pF typ.) | Rated Voltage (V) | Rated Current (A) | Indication | min. Packaging | |
|------------|-------------------------|-----------------------------|-------------------|-------------------|------------|----------------|--------------|
| ELKEA100FA | 500 | 10 | 50 | 6.0 | 100□ | 2,000 pcs. | |
| ELKEA220FA | 300 | 22 | | | 220□ | | |
| ELKEA470FA | 150 | 47 | | | 470□ | | |
| ELKEA101FA | 70 | 100 | | | 101□ | | |
| ELKEA221FA | 30 | 220 | | | 221□ | | |
| ELKEA471FA | 15 | 470 | | | 471□ | | |
| ELKEA102FA | 7 | 1000 | | | 102□ | | |
| ELKEA222FA | 3 | 2200 | | | 222□ | | |
| ELKEA103FA | 0.5/DC | 10000 | | | 103□ | | Indication 1 |
| ELKEA333FA | 0.2/DC | 33000 | | | 25 | | 333□ |

note1 : 4th letter (□) of marking indicates the Month Code.
note2 : Indication 1, 2 refer to Indication examples.

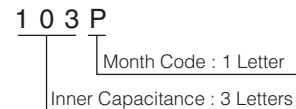
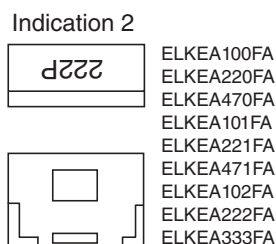
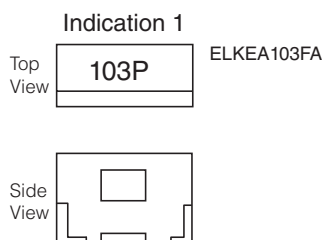
Performance characteristics (Reference)



Equivalent circuit, measurement block diagram



Indication Examples



Coil type EMI Filters (Digital Noise Filters)

SMD

Type: **ELKE**



Features

- 3218 case size, 2 A rated current
- No variation in attenuation characteristics due to current changes
- Easily discernible part number written by lasers
- RoHS compliant

Typical Specification

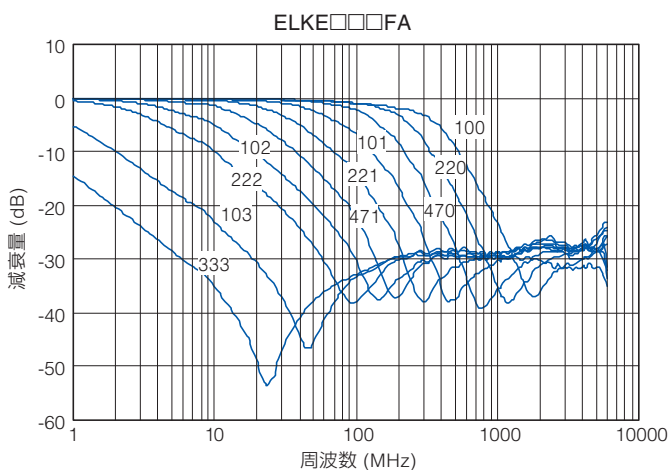
- Operating temperature : -40 to +85 °C
- Rated Voltage : DC 50 V (Except ELKE333FA : DC25 V)
- Rated Current : DC 2 A

Standard Parts

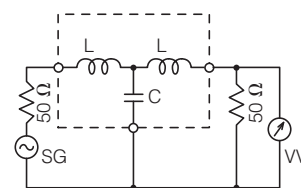
| Part No. | Cut off frequency (MHz) | Inner Capacitance (pF typ.) | Rated Voltage (V) | Rated Current (A) | Indication | min. Packaging unit |
|-----------|-------------------------|-----------------------------|-------------------|-------------------|------------|---------------------|
| ELKE100FA | 250 | 10 | 50 | 2.0 | 100□ | 2,000 pcs. |
| ELKE220FA | 200 | 22 | | | 220□ | |
| ELKE470FA | 100 | 47 | | | 470□ | |
| ELKE101FA | 50 | 100 | | | 101□ | |
| ELKE221FA | 25 | 220 | | | 221□ | |
| ELKE471FA | 10 | 470 | | | 471□ | |
| ELKE102FA | 5 | 1000 | | | 102□ | |
| ELKE222FA | 2 | 2200 | | | 222□ | |
| ELKE103FA | 0.5/DC | 10000 | | | 103□ | |
| ELKE333FA | 0.2/DC | 33000 | | | 25 | |

note1 : 4th letter (□) of marking indicates the Month Code.

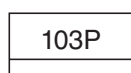
Performance characteristics (Reference)



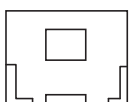
Equivalent circuit, measurement block diagram



Indication Examples



(Top View)

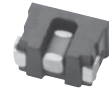


(Side View)

1 0 3 P

Month Code : 1 Letter
Inner Capacitance : 3 Letters

Varistor included Coil type EMI Filters (Digital Noise Filters) SMD



Type: **ELKEV**

Features

- High ESD suppression with varistor and included coils
- No variation in attenuation characteristics due to current changes
- Easily discernible part number written by lasers
- RoHS compliant

Typical Specification

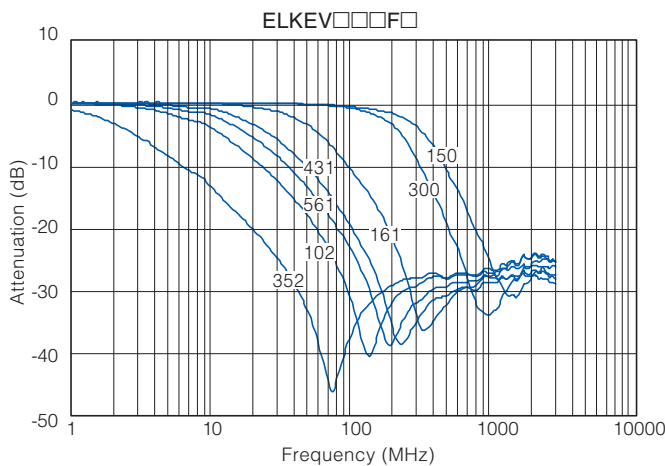
- Operating temperature : -40 to +85 °C
- Rated Voltage : Applicable normal voltage for varistor
- Rated Current : DC 2 A

Standard Parts

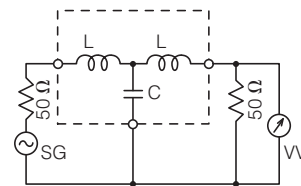
| Part No. | Cut off frequency (MHz) | Inner Capacitance (pF typ.) | Rated Voltage (V) | Applicable circuit voltage (V max.) | Indication | | min. Packaging |
|------------|-------------------------|-----------------------------|-------------------|-------------------------------------|------------|------------|----------------|
| | | | | | Part No. | Indication | |
| ELKEV150FF | 250 | 15 | 27 | 15 | 2.0 | 150□ | 2,000 pcs. |
| ELKEV300FF | 200 | 30 | 27 | 15 | | 300□ | |
| ELKEV161FF | 50 | 160 | 27 | 15 | | 161□ | |
| ELKEV431FF | 20 | 430 | 27 | 15 | | 431□ | |
| ELKEV561FE | 10 | 560 | 22 | 12 | | 561□ | |
| ELKEV112FC | 8 | 1050 | 12 | 5 | | 112□ | |
| ELKEV352FC | 1/DC | 3500 | 12 | 5 | | 352□ | |

Note1 : 4th letter (□) of marking indicates the Month Code.

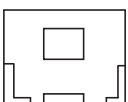
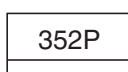
Performance characteristics (Reference)



Equivalent circuit, measurement block diagram

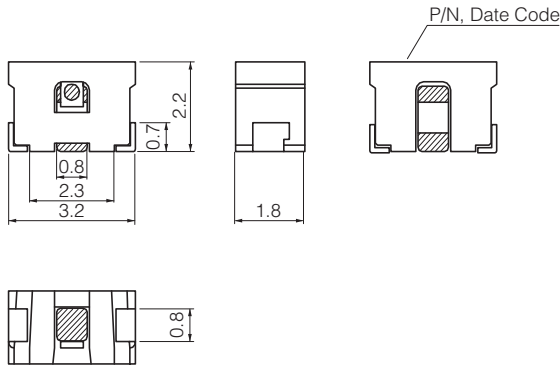


Indication Examples

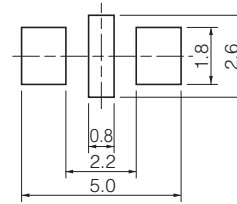


3 5 2 P
 └──┬──┬──┬──┬──┘
 Month Code : 1 Letter
 Inner Capacitance : 3 Letters

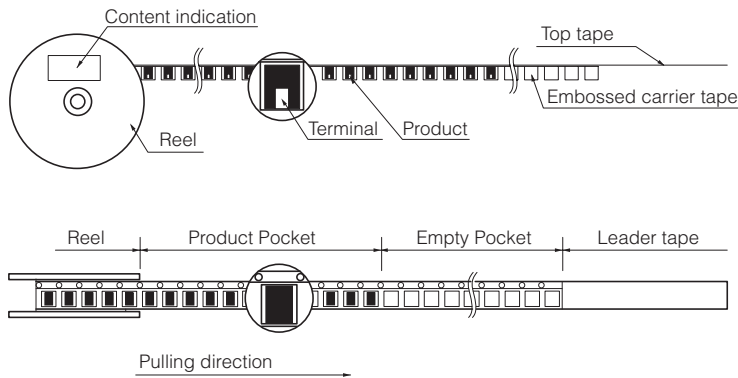
Dimensions in mm (not to scale)



Land Pattern in mm (not to scale)

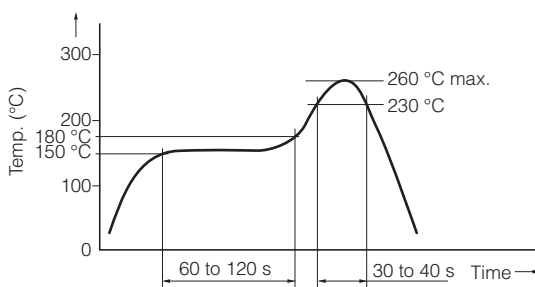


Packaging state



Reel Size : $\phi 178$
 Q'ty : 2,000 pcs./reel
 Packaging : Embossed Carrier Taping

Soldering conditions for reflow



Storage Conditions

- Package : Normal temperature (-5 to 35 °C), normal humidity (85 %RH max.), shall not be exposed to direct sunlight and harmful gases and care should be taken so as not to cause dew.
- Operating Temperature : -40 to +85 °C

Storage Period

- Solderability may be reduced due to the conditions of high temperature and high humidity which causes the oxidation of tin-plated terminals. Even if storage conditions are within specified limits, solderability may be reduced with time. Therefore, please control the storage conditions and use the product within 6 months of receipt.

⚠ Safety Precautions

The following are precautions for individual products. Please also refer to the common precautions for EMC Components in this catalog.

1. Operation range and environments

- ① These products are designed and manufactured for general and standard use in general electronic equipment (e.g. AV equipment, home electric appliances, office equipment, information and communication equipment)
- ② These products are not intended for use in the following special conditions. Before using the products, carefully check the effects on their quality and performance, and determine whether or not they can be used.
 - In liquid, such as water, oil, chemicals, or organic solvent
 - In direct sunlight, outdoors, or in dust
 - In salty air or air with a high concentration of corrosive gas, such as Cl₂, H₂S, NH₃, SO₂, or NO₂
 - In an environment where these products cause dew condensation

2. Handling

- ① Do not bring magnets or magnetized materials close to the product. The influence of their magnetic field can change the inductance value.
- ② Do not apply strong mechanical shocks by either dropping or collision with other parts. Excessive shock can damage the part.

3. Land pattern design

- ① Please refer to the recommended land pattern for each type shown on the datasheet.
- ② In case of reflow soldering, consider the layout because taller components close to EMI filters tend to block thermal conduction.

4. Mounting

- ① Avoid excessive placement force.
- ② Do not bend or twist the PWB after mounting the part.

5. Cleaning

- ① Do not use acid or alkali agents. Some cleaning solvents may damage the part. Confirm by testing the reliability in advance of mass production.
- ② If Ultrasonic cleaning is used, please confirm the reliability in advance. It is possible that combined resonance of component, PWB and cavitation can cause an abnormal vibration mode to exist causing damage.