

# EMI/EMC FILTER

## ES1 SERIES



### FEATURES

- Suitable for the products that must conform to FCC, FTZ.
- Remarkable attenuation for high voltage impulse.
- Good shield effect by using metal case.
- Excellent filtering characteristics for both differential mode and common mode.
- Epoxy molded for reliability.
- Bidirectional structure effective for both noise from externally and internally generated.

### APPLICATIONS

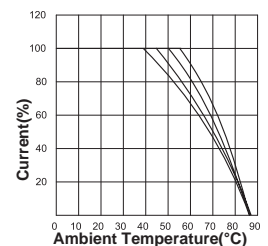
- Digital equipments.
- Mini computers and peripherals.
- Measuring instruments, medical instruments.
- For equipment requiring very high impulse attenuation.
- Suitable for FA equipments.
- Industrial equipments like UPS, inverters, Converters.
- Communication equipments.
- OA equipments like copy machine, FAX, etc..

## SPECIFICATIONS

Model	Rated Voltage (AC,DC)	Rated Current	Temperature Rise	Operating Temperature
ES1-F05, T05	250V	5A	30°C max.	-25°C to + 85°C Including temperature rise ※ Fig.1
ES1-F08, T08	250V	8A	30°C max.	
ES1-F10, T10	250V	10A	30°C max.	
ES1-F15, T15	250V	15A	35°C max.	
ES1-F20-B, T20	250V	20A	45°C max.	
ES1-T30	250V	30A	40°C max.	

● Many variations in X and Y capacitor value are available with approvals. For the details, consult with local agent.

Note : Test Voltage : 1500V AC one minute, line to earth.  
 Insulation Resistance : 300 Mohm min. at 500V DC.  
 Leakage Current : 0.5mA max.  
 Voltage Drop : 1V max. at rated current.  
 Discharge Time : 0.4sec max.  
 Weight : 250g for ES1-Series except 720g for ES1-T30.  
 ※The temperature rise of ES1→20 can be decreased to 30°C by mounting on 200mm x 200mm x t:1.0mm steel chassis.



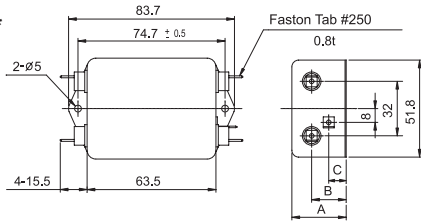
※ Fig.1

### ■ Model Number Construction

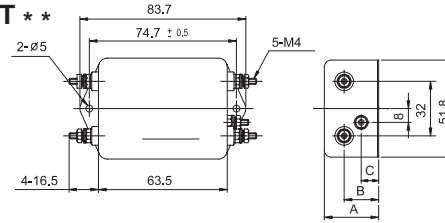
ES1	T	05	B
Series Description	Input/Output Terminal style F : Faston Tab #250 T : M4 Stud M5 Stud(ES1-T30 Only)	Current Rating:AC rms 05:5 amp, 08:8 amp 10:10 amp, 15:15 amp 20:20 amp, 30:30 amp	Input/Output Terminal style B :Faston Tab #250 (ES1-F20 Only)

## Shapes and Dimensions

ES1-F \*\*

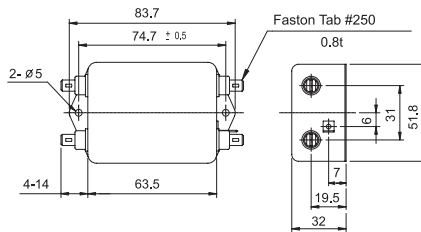


ES1-T \*\*

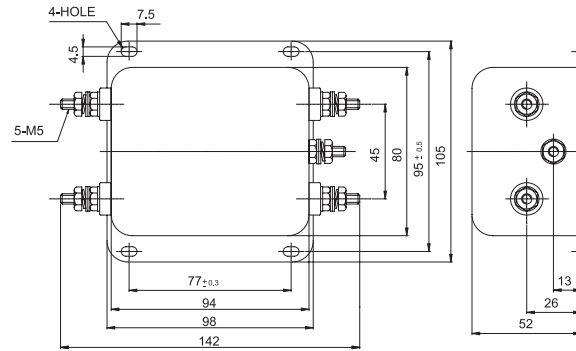


MODEL	A	B	C
ES1-∗10, 15, 20	38	24	11
ES1-∗05, 08	32	20	8

ES1-F20-B



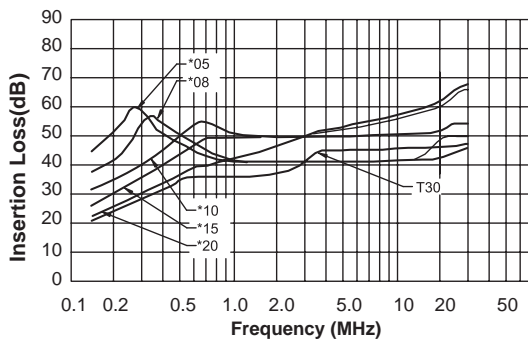
ES1-T30



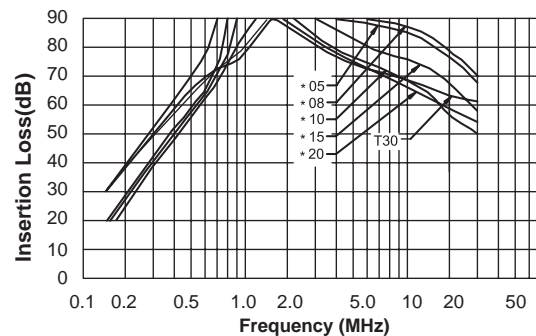
\* General tolerance :  $\pm 1.0$   
 \* Unit : mm  
 \* Metal Case

## Attenuation Characteristics

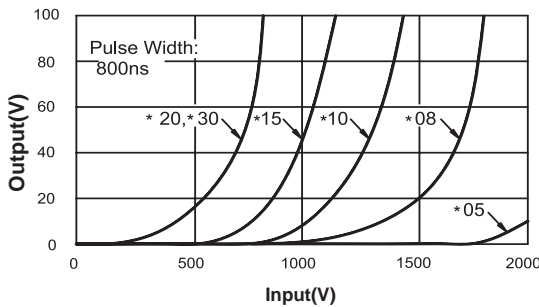
### ● Common Mode (ES1-(∗05,∗08,∗20,T30)types)



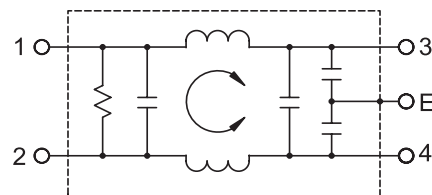
### ● Differential Mode (ES1-(∗05,∗08,∗20,T30)types)



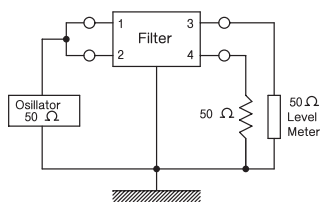
### ● Impulse Characteristics



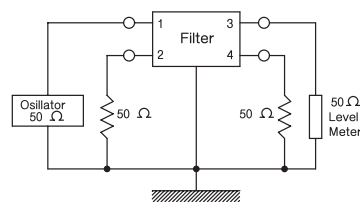
### ● Circuit Diagram



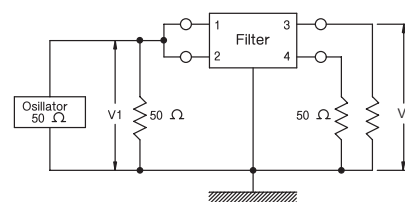
### ● Measurement configuration



Common Mode



Differential Mode



Pulse attenuation