

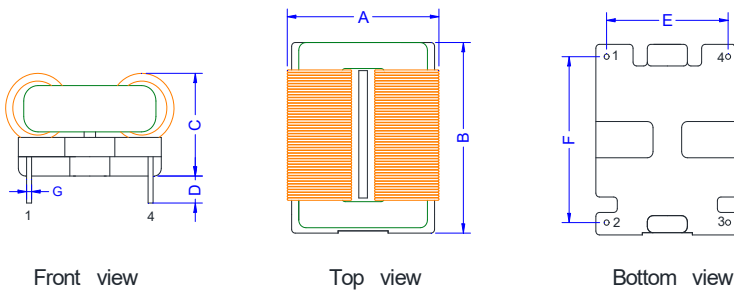
### Features

- \* Small size, low leakage flux due to ESQ core
- \* Low stray capacitance, High attenuation of a wide frequency band
- \* There is no danger of the layer short for the single-layer rolling.
- \* High attenuation to the normal mode noise
- \* It's winding time reduces 90%, and cost is lower than EE、ET、UU、Toroidal core products.
- \* Standardized structure, more suitable for automatic plug-in operation

### Applications

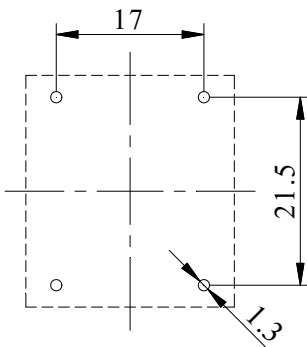
- \* The power adapter
- \* Switching Mode Power Supply
- \* TV/Computer
- \* Industrial Power Supply
- \* Led driver
- \* Automotive Electronic Equipment etc

### Appearance and Dimensions

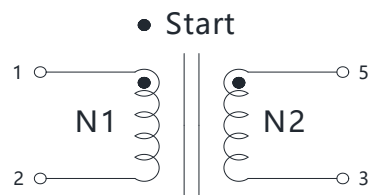


Dimensions(mm)							
Series	A	B	C	D	E	F	G
ESQ2418H	23.0max	26.5max	15.5max	3.5±0.5	17.0±0.5	21.5±0.5	0.8±0.1

### Land Pattern Dimensions



### Circuit Diagram



**Product Identification**ESQ - 2418H - 123 MIN - C90

①      ②      ③      ④      ⑤

- ① Product Symbol
- ② Dimensions
- ③ Inductance Value (123:12mH)
- ④ Inductance Tolerance (MIN)
- ⑤ Current

### Electrical Characteristics

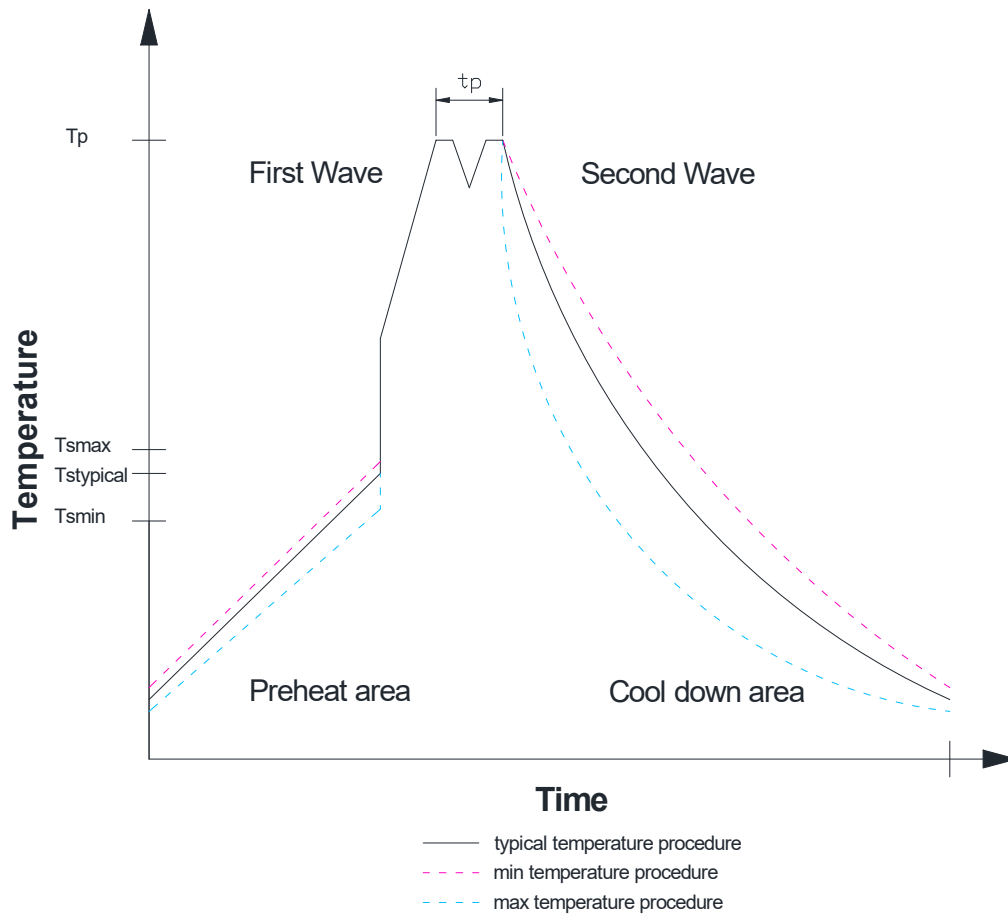
Part No.	Inductance 1KHz,0.25V	Tol.	DC Resistance max.	Rated Current typ.	Rated Voltage typ.	Hi-pot 2mA 3S
Unit	mH	-	mΩ	A	V	Vac
Symbol	L	-	R <sub>DC</sub>	I <sub>RMS</sub>	V <sub>RMS</sub>	-
ESQ2418H-502MIN-C72	5.00	min	50.0	7.20	250	1500
ESQ2418H-103MIN-C45	10.0	min	75.0	4.50	250	1500
ESQ2418H-123MIN-C45	12.0	min	100	4.50	250	1500

**Remark:**

- ※1:All test data is referenced to 20°C ambient;
- ※2:R<sub>DC</sub>:DC resistance at 20°C;
- ※3:Rated current:I<sub>SAT</sub> or I<sub>RMS</sub>,whichever is smaller;
- ※4:Saturation Current: For typ. Value, DC current at which the inductance drops 30% from its value without current;
- ※5:Temperature Rise Current: DC current that causes the temperature rise ( $\Delta T$ ) from 20°C ambient,for typ. Value,  $\Delta T$  is approximate 40°C;
- ※6:Temperature Rise Voltage: DC voltage that causes the temperature rise ( $\Delta T$ ) from 20°C ambient,For max. Value,  $\Delta T < 40^\circ\text{C}$ ;
- ※7:Hi-pot 2mA 3S:A voltage of 1500V is applied between the conductive parts and insulating parts of the tested product and held for 3 seconds to detect whether the insulation layer has problems such as breakdown, flashover and excessive leakage current;
- ※8:Specifications subject to change without notice. Please check our website for latest information.

## Recommended Soldering Conditions

Classification Wave Soldering Profile:



Profile Feature		Lead-Free Assembly
Preheat Temperature Min	$T_{s \min}$	100 °C
Preheat Temperature Typical	$T_{s \text{ typical}}$	120 °C
Preheat Temperature Max	$T_{s \max}$	130 °C
Preheat Time $t_s$ from $T_{s \min}$ to $T_{s \max}$	$t_s$	70 seconds
Ramp-up Rate	$\Delta T$	150 °C max.
Peak Temperature	$T_p$	250 °C - 260 °C
Time of actual peak temperature	$t_p$	max. 10 seconds max. 5 seconds each wave
Ramp-down Rate, Min		~ 2 K/ second
Ramp-down Rate, Typical		~ 3.5 K/ second
Ramp-down Rate, Max		~ 5K/ second
Time 25 °C to 25 °C		4 minutes

Refer to EN61760-1:2006

## Products Storage

(1) Storage period

Products which inspected in LYEC over 12 months ago should be examined and used, which can be confirmed with inspection No. marked on the container. Solderability should be checked if this period is exceeded.

(2) Storage conditions

Products should be storage in the warehouse on the following conditions:

Temperature: Less than 40°C

Humidity : Less than 75% relative and humidity

No rapid change on temperature and humidity

- (3) Don't keep products in corrosive gases such as sulfur, chlorine gas or acid, or it may cause oxidization of electrode, resulting in poor solderability.
- (4) Products should be storage on the palette for the prevention of the influence from humidity, dust and so on.
- (5) Products should be storage in the warehouse without heat shock, vibration, direct sunlight and so on.
- (6) Products should be storage under the airtight packaged condition.