



ECUS INTERNATIONAL CO., LTD

HV Coupling Transformer

Part Number: ETA16200

Date: 26 Nov 2020

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HV Coupling Transformer

P#: ETA16200



Features

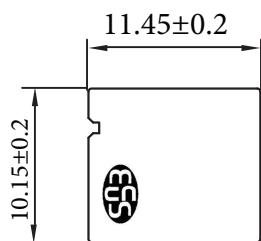
- Small size High-Voltage coupling transformer
- Low insertion loss
- DIP and THT
- RoHS compliant
- 5000 Vrms, one minute winding-to-winding isolation.

Technical data

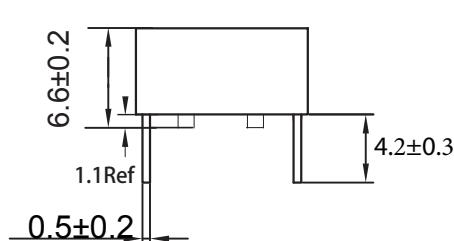
- Ambient temperature: -40°C to $+85^{\circ}\text{C}$
- Storage Temperature Range: -40°C to $+85^{\circ}\text{C}$

Mechanical Dimensions (in mm)

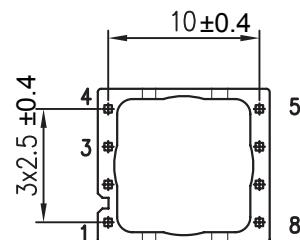
Top View



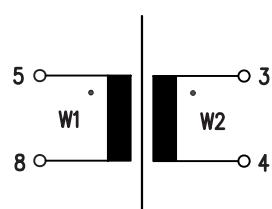
Side View



Bottom View

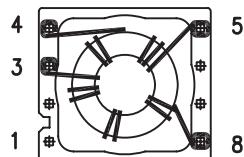


Schematic

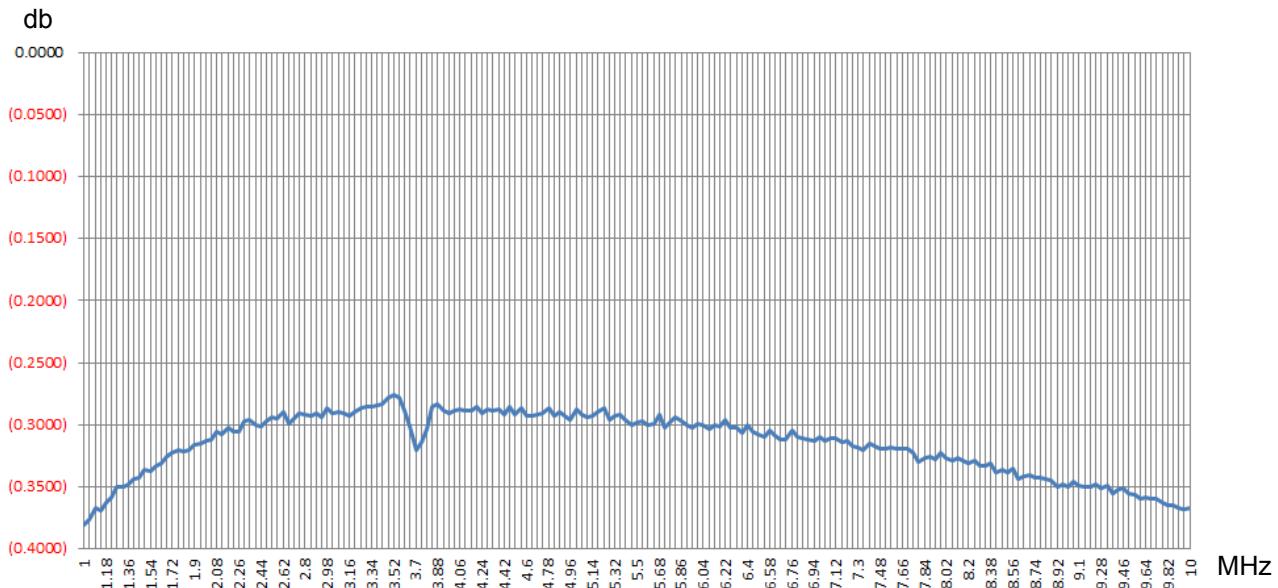


HV Coupling Transformer**P#: ETA16200****Electrical Characteristics**

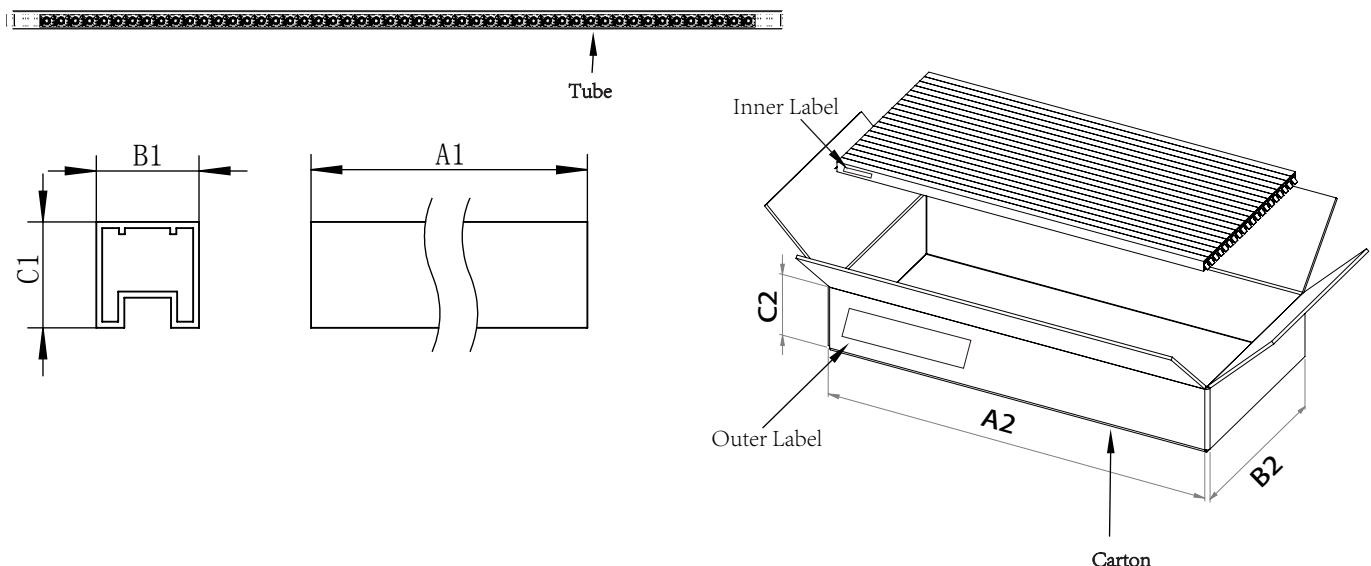
Property		Value	Test Conditions
Ls	W1(5-8)	20 uH Min	f=2.5MHz U≤0.1V
Cp	W1-W2	5.0 pF Max	f=2.5MHz U≤0.1V
L leakage	5-8(pin3,4 short)	0.3 uH Max	f=2.5MHz U≤0.1V
RDC	W1/W2	96mΩ Max/96mΩ Max	
Up	Pri.-Sec.	5.0KV AC	f=50Hz t=60s I _{leakage} =1mA
Surge Test	Pri.-Sec.	6.6KV/3.3KA	1.2/50uS\8/20uS ±5Times
Turns ratio	W1:W2	1:1	

Windings**Hi-Pot Test**W1-W2 5.0KV AC, t=60s I_{leakage}=1mA**Environmental Test**

Climatic Category IEC 68-1 40/125/56

HV Coupling Transformer
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Typical Differential Mode Insertion Loss Characteristics

Delivery mode and packing unit

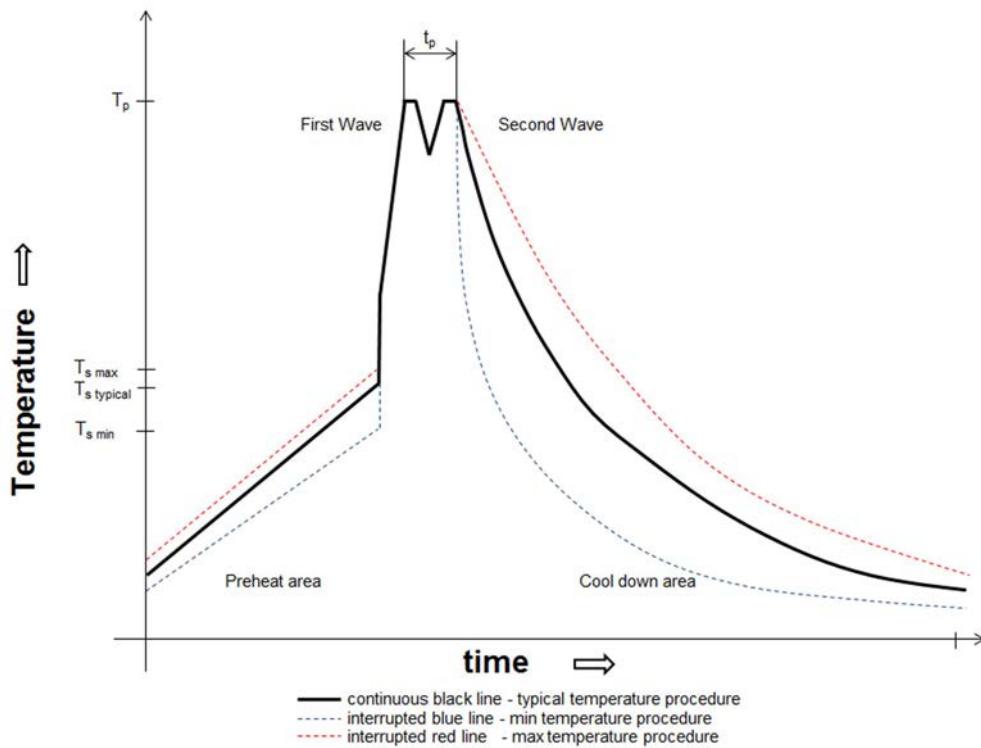
■ Tube



	A1(mm)	B1(mm)	C1(mm)	A2(mm)	B2(mm)	C2(mm)	Tube(pcs.)	Carton(pcs.)
Tol.	±2	±0.2	±0.2	Typ.	Typ.	Typ.		
Qua.	540	13.6	14.0	555	285	85	50	5000

Soldering Profiles

Classification Wave Soldering Profile



Classification Wave Profile

Profile Feature	Pb-Free Assembly	Sn-Pb Assembly
Preheat		
- Temperature Min ($T_{s\ min}$)	100°C	100°C
- Temperature Typical ($T_{s\ typical}$)	120°C	120°C
- Temperature Max ($T_{s\ max}$)	130°C	130°C
- Time (t_s) from $T_{s\ min}$ to $T_{s\ max}$	70 seconds	70 seconds
Δ preheat to max Temperature	150°C max.	150°C max.
Peak temperature (T_p)	250°C - 260°C	235°C - 260°C
Time of actual peak temperature (t_p)	max. 10 seconds max. 5 second each wave	max. 10 seconds max. 5 second each wave
Ramp-down rate		
- Min	~ 2 K/s	~ 2 K/s
- Typical	~ 3.5 K/s	~ 3.5 K/s
- Max	~ 5 K/s	~ 5 K/s
Time 25°C to 25°C	4 minutes	4 minutes

refer to EN 61760-1:2006

Cautions and Warnings

- Please note the recommendations in our Inductors data book (latest edition) and in the data sheets.
 - Particular attention should be paid to the derating curves given there.
 - The soldering conditions should also be observed. Temperatures quoted in relation to wave soldering refer to the pin, not the housing.
- If the components are to be washed varnished it is necessary to check whether the washing varnish agent that is used has a negative effect on the wire insulation, any plastics that are used, or on glued joints. In particular, it is possible for washing varnish agent residues to have a negative effect in the long-term on wire insulation.
- The following points must be observed if the components are potted in customer applications:
 - Many potting materials shrink as they harden. They therefore exert a pressure on the plastic housing or core. This pressure can have a deleterious effect on electrical properties, and in extreme cases can damage the core or plastic housing mechanically.
 - It is necessary to check whether the potting material used attacks or destroys the wire insulation, plastics or glue.
 - The effect of the potting material can change the high-frequency behaviour of the components.
- Ferrites are sensitive to direct impact. This can cause the core material to flake, or lead to breakage of the core.
- Even for customer-specific products, conclusive validation of the component in the circuit can only be carried out by the customer.
- Specifications are subject to change without notice.
- Customers should verify actual device performance in their specific applications

Important Notes

The following applies to all products named in this publication:

1. Some parts of this publication contain statements about the suitability of our products for certain areas of application.

These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned.

We nevertheless expressly point out that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application.

As a rule, ECUS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an ECUS product with the properties described in the product specification is suitable for use in a particular customer application.

2. We also point out that in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.

3. The warnings, cautions and product-specific notes must be observed.

4. In order to satisfy certain technical requirements, some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as hazardous). Useful information on this will be found in our Material Data Sheets on the Internet (www.ecusgroup.com). Should you have any more detailed questions, please contact our sales offices.

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8. RoHS Directive 2002/95/EC Jan 27, 2003 including Annex.