



ECUS INTERNATIONAL CO., LTD

HV Coupling Transformer

Part Number: ETA16200

Date: 26 Nov 2020

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HV Coupling Transformer

P#: ETA16200



Features

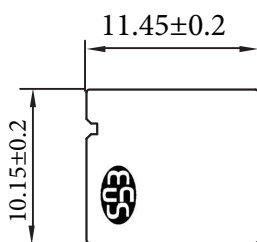
- Small size High-Voltage coupling transformer
- Low insertion loss
- DIP and THT
- RoHS compliant
- 5000 Vrms, one minute winding-to-winding isolation.

Technical data

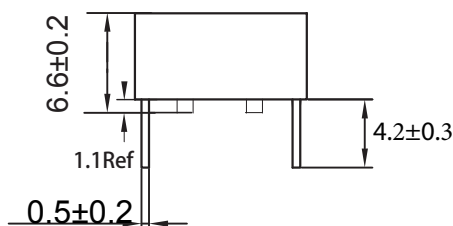
- Ambient temperature: $-40\text{ }^{\circ}\text{C}$ to $+85\text{ }^{\circ}\text{C}$
- Storage Temperature Range: $-40\text{ }^{\circ}\text{C}$ to $+85\text{ }^{\circ}\text{C}$

Mechanical Dimensions (in mm)

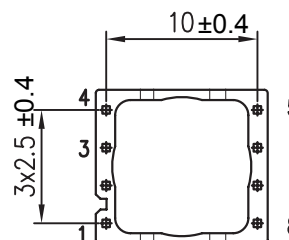
Top View



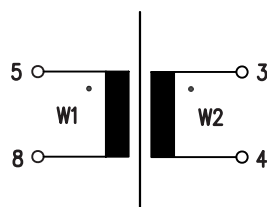
Side View



Bottom View



Schematic



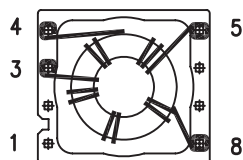
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P#: ETA16200

Electrical Characteristics

Property		Value	Test Conditions
Ls	W1(5-8)	20 uH Min	f=2.5MHz $U \leq 0.1V$
Cp	W1-W2	5.0 pF Max	f=2.5MHz $U \leq 0.1V$
L leakage	5-8(pin3,4 short)	0.3 uH Max	f=2.5MHz $U \leq 0.1V$
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 ± 5 Times
Turns ratio	W1:W2	1:1	

Windings



Hi-Pot Test

W1-W2 5.0KV AC, t=60s $I_{leakage}=1mA$

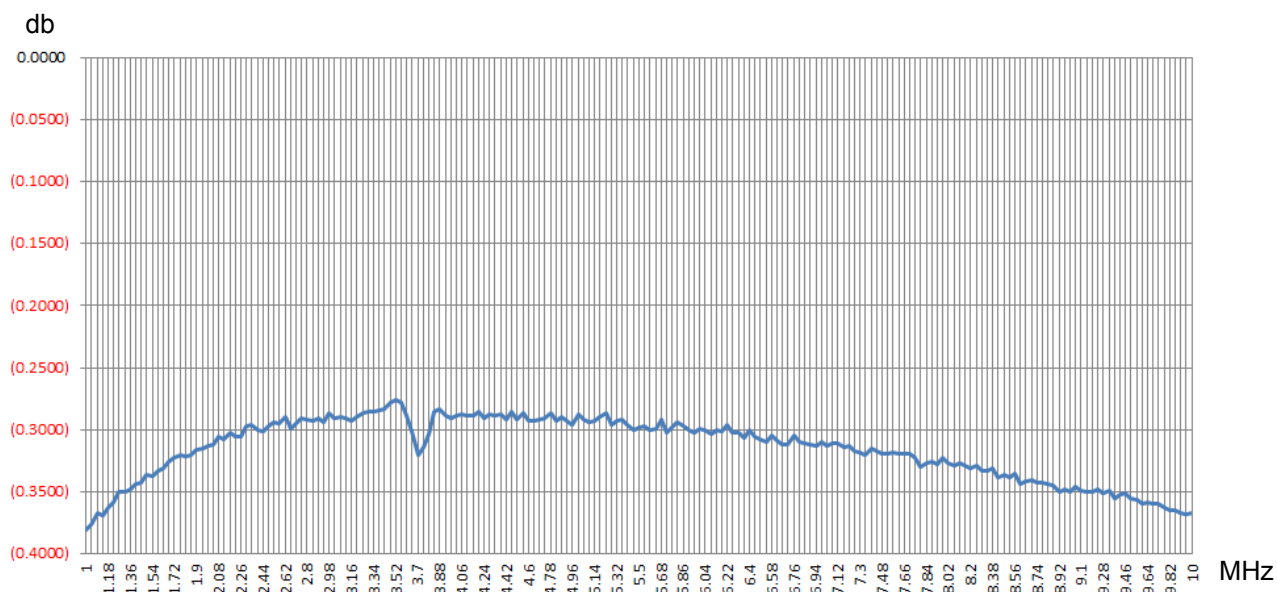
Environmental Test

Climatic Category IEC 68-1 40/125/56

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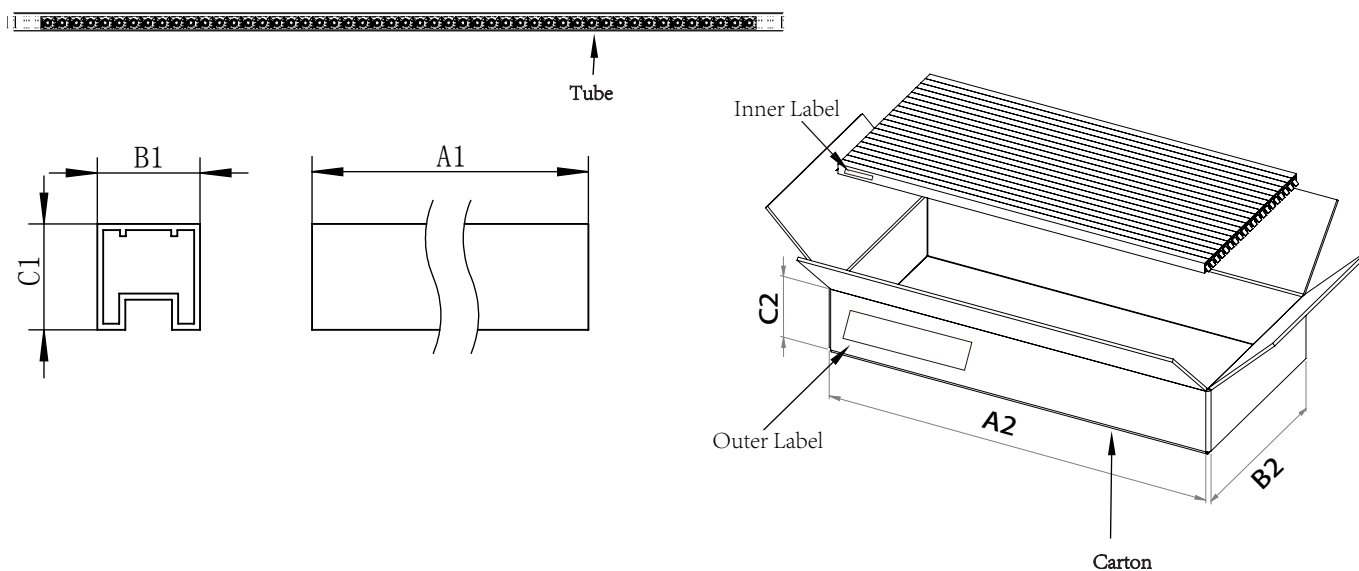
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Typical Differential Mode Insertion Loss Characteristics



Delivery mode and packing unit

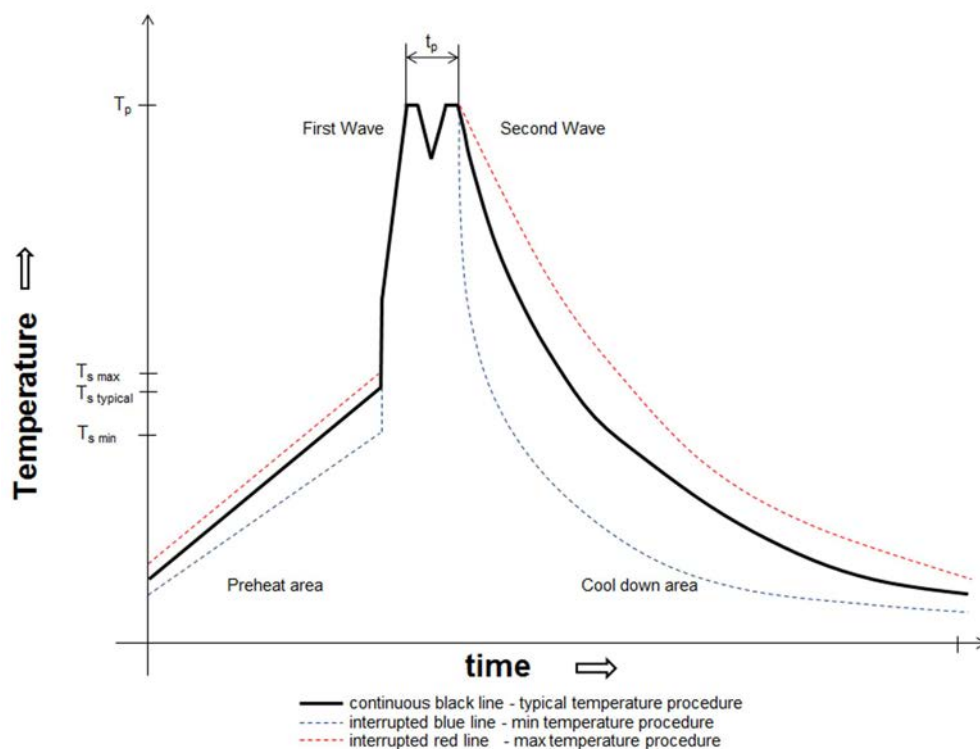
■ Tube



	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 <ul style="list-style-type: none"> - Temperature Min (T_{smin}) - Temperature Typical ($T_{stypical}$) - Temperature Max (T_{smax}) - Time (t_s) from (T_{smin} to T_{smax}) 	100°C 120°C 130°C 70 seconds	100°C 120°C 130°C 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 <ul style="list-style-type: none"> - Min - Typical - Max 	~ 2 K/s ~ 3.5 K/s ~ 5 K/s	~ 2 K/s ~ 3.5 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

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