

KV ELECTRONICS CO., LTD.

988 MOO 2, SOI THETSABAN BANG PU 60

TUMBOL THAI BAN , AMPHUR MUANG

SAMUTPRAKARN 10280

TEL. +66(0) 2701-2969 , FAX +66(0) 2701-2966

E-MAIL : kvea@loxinfo.co.th

Customer name : Electronic source

Customer part no. : ES00256-REV01

Drawing no. :

Description : Transformer EE-13

KV no. : 19052

Revision : 01

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Issue date
25 January 2019

Check by

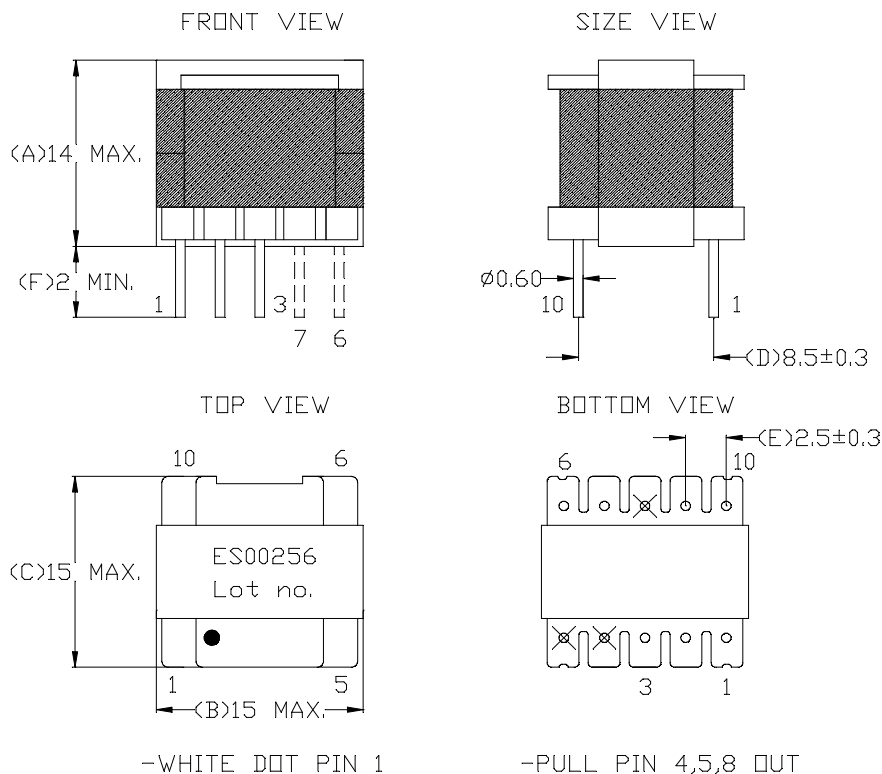
Approve by

Revise record.

Rev.	Date	Revise description	Page.
01	20-Feb-19	- Change from Customer part no. ES00256 to Customer part no. ES00256-REV01 - Update winding construction follow to customer.	3 3

**1. Components list.**

<u>Item.</u>	<u>Material.</u>	<u>Manufacturer.</u>
1. Bobbin	Phenolic (UL94V-0)	Chang chun plastic co., ltd UL no. E59481(S). or equivalent.
2. Core EE13/13/5.85	PC44	Ou Ge or equivalent.
3. Copper wire	Polyurethane enameled copper (130 deg.c).	Thai hitachi enamel wire co., ltd. UL no. E137472. Pacific-Thai electric wire & cable co.,ltd. UL no. E142108. or equivalent.
4. T.I.W. wire	Tripple insulating wire (130 deg.c)	Dah Jin Technology.co.,ltd UL no. E236542. TA YA Electric wire & cable co.,ltd. UL no. E225803. or equivalent.
5. CU-Foil 0.05mm. X 6mm.	Copper	Local.
6. Insulation tape	Polyester #1350F-1 (130 deg.c) Polyester #35660 (130 deg.c)	3M UL No.E17385. Symbio INC UL.no. E50292.
7. Kapton tape	Polyimide film insulating tape with silicone base adhesive, Cat. No. KA180K	Symbio Inc. UL No.E50292.
8. Solder bar	Sn / Cu	Ultra core or equivalent.
9. Varnish	Ultimeg 2000/380	A.E.V PLC UL no. E220579 or equivalent.

The drawing and dimension in millimeter unit.

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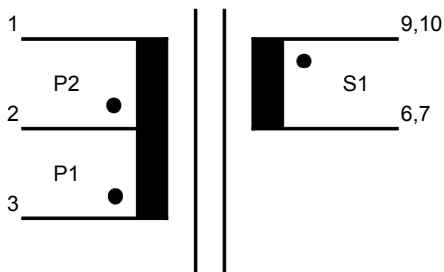
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**2. Schematic diagram and winding instruction.**

- P1 Pin 3 – 2 = Wire 0.25 mm. / 50 Ts.
Insulation 3 Ts.
- S1 Pin 9,10 – 6,7 = TEX-E Wire 0.25 mm. X2 / 4 Ts.
Insulation 3 Ts.
- P2 Pin 2 – 1 = Wire 0.25 mm. / 49 Ts.
Insulation 3 Ts.
- Assembly CORE
Copper -Foil 0.05 X 6.00 mm. / 1 Ts.
Insulation tape 8.00 mm. / 1 Ts.

Note : S1 Use kapton tape**3. Electricals specification and test data (at 25 deg.c).**

Item	Pin no.	Specification	Test data									
			1	2	3	4	5	6	7	8	9	10
Inductance (L) At 10kHz, 1V	3 – 1	1.15 mH +/-10%	1.16	1.09	1.13	1.09	1.12	1.13	1.12	1.19	1.12	1.06
Leakaged Inductance At 10kHz, 1V (LK) (Shorted 6,7,9,10)	3 – 1	130.00 uH Max.	98.37	98.69	98.67	98.70	100.20	102.33	99.47	96.27	101.09	101.81
DC-Resistance (DCR)	3 – 1	1.30 Ohm Max.	1.05	1.05	1.05	1.05	1.06	1.05	1.05	1.05	1.05	1.05
Voltage ratio test. I/P 3-1, 20KHz, 1Vrms	9,10 – 6,7	0.035 – 0.045 Vrms	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
Hi-Potential test. 1mA 50Hz	Apply 1000Vac between P1,P2 to S1 for 2 sec. Apply 500Vac between wire to core for 2 sec.								Passed Passed			
Phase check follow to schematic diagram.									Passed			

**Mechanical test
Sample no.**

	A	B	C	D	E	F
1	13.61	14.25	12.83	8.44	2.53	2.5
2	13.61	14.25	12.67	8.55	2.65	2.5
3	13.63	14.24	12.95	8.48	2.59	2.5
4	13.52	14.21	12.77	8.54	2.68	2.5
5	13.49	14.10	13.11	8.49	2.54	2.5
6	13.59	14.08	12.62	8.59	2.66	2.5
7	13.66	14.30	12.67	8.64	2.64	2.5
8	13.62	14.19	12.79	8.58	2.56	2.5
9	13.57	14.24	12.91	8.48	2.60	2.5
10	13.65	14.46	12.83	8.64	2.59	2.5

Test date : 25 February 2019
Test by : Apiwat

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4. Product condition

Handing :

Should prevent contamination by the ambient environment from dust, corrosive materials, humidity/water, or other chemicals (containing chlorine or phosphates). Gloves are a better choice to prevent contamination.

Shelf Life :

Storage Life has a minimum 1 year with below condition

- o Temperature 5° C to 30° C.
- o Relative humidity (RH) below 60%
- o Original packaging

Installation :

Perform as assembly manufacturer's procedure

Disposal procedure :

Product must NEVER be disposed of in household waste. To reduce environmental impacts, bring the product to a certified recycling depot at the end of its life.