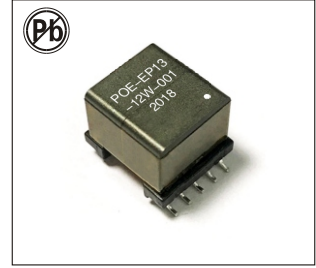


POE DC/DC TRANSFORMERS POE-EP13 SERIES



Features

- Surface mount
- Power from 12 to 72 W
- Output voltage from 3.3 to 12 V
- Operating temperature: -40°C up to +165°C
- RoHS compliant

Applications

- VoIP phones
- WLAN APs
- Security IP cameras
- Routers
- Gateways

ELECTRICAL CHARACTERISTICS:@25°C

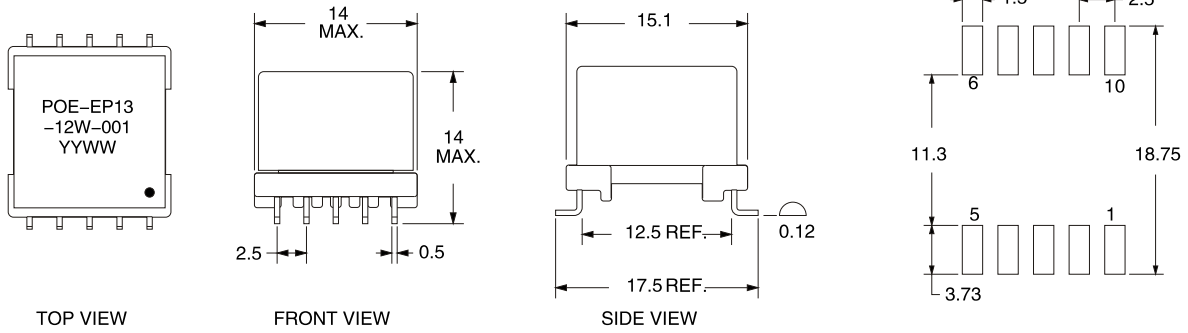
| Part Number | Primary Inductance | | Leakage Inductance | | DCR | | Turns ratio | | Input Voltage Switching Frequency | Main Output |
|----------------------------|-------------------------------|----------------|--|---------------|---|--|---|---|-----------------------------------|----------------|
| | | | | | | | | | | |
| POE-EP13 -12W-001 | (1-2) @ 100 kHz / 0.1 V | 133uH ± 7% | (1-2) w/ (3,4,6,7,10) shorted @ 250 kHz / 0.1V | 1.3uH max | (1-2) (3-4) (6-7) (7-10) | 340mΩ max 250mΩ max 150mΩ max 8mΩ max | (1-2 : 3-4) (1-2 : 7-10) (1-2 : 6-7) | 2.77 ± 3%:1 9 ± 3%:1 4.5 ± 3%:1 | 36 V – 57 V 200 kHz | 3.3 V 3.3 A |
| POE-EP13 -25W-001 | (1-2) @ 100 kHz / 0.1 V | 100uH ± 10% | (1-2) w/ (4,5,6,7,9,10) shorted @ 100 kHz / 0.1 V | 0.55uH max | (1-2) (4-5) (6,7-9,10) | 116mΩ max 163mΩ max 6mΩ max | (1-2:4-5) (1-2:6,7-9,10) | 1.82 ± 3%:1 4 ± 3%:1 | 33 V – 57 V 250 kHz | 5 V 5 A |
| ① POE-EPA13 -12W-001 | (1-2) @ 1 kHz / 0.5 V | 150uH ± 7% | (1-2) w/ (3,4,6,7,8,9,10) shorted @ 250 kHz / 0.5 V | 1.0uH max | (1-2) (3-4) (6-7) (7,8-9,10) | 166mΩ max 166mΩ max 68.5mΩ max 6.3mΩ max | (1-2:7,8-9,10) (1-2:3-4) (1-2:6-7) | 6 ± 3%:1 2.66 ± 3%:1 6 ± 3%:1 | 36 V – 57 V 200 kHz | 5 V 2.4 A |
| ① POE-EPA13 -12W-002 | (3-4) @ 100 kHz / 0.1 V | 127uH ± 10% | (3-4) w/ (1,2,7,8,9,10) shorted @ 250 kHz / 0.1 V | 0.65uH max | (3-4) (2-1) (7-9) (8-10) | 170mΩ max 100mΩ max 65mΩ max 65mΩ max | (3-4:2-1) (3-4:7-9) (3-4:8-10) | 2 ± 3%:1 2 ± 3%:1 2 ± 3%:1 | 36 V – 72 V 250 kHz | 12 V 1.08 A |
| POE-EPA13 -25W-001 | (1-2) @ 1 kHz / 0.5 V | 65uH ± 7% | (1-2) w/ (3,4,6,7,8,9,10) shorted @ 250 kHz / 0.5 V | 0.85uH max | (1-2) (3-4) (6-7) (7,8-9,10) | 120mΩ max 80mΩ max 65mΩ max 5.5mΩ max | (1-2:7,8-9,10) (1-2:3-4) (1-2:6-7) | 6 ± 3%:1 2.57 ± 3%:1 6 ± 3%:1 | 36 V – 57 V 200 kHz | 5 V 5 A |
| ① POE-EPA13 -25W-002 | (1-3) @ 100 kHz / 0.1 V | 80uH ± 7% | (1-3) @ 100 kHz / 0.1 V w/ (4,5,6,7,9,10) shorted | 1.0uH max | (1-3) (4-5) (7,6-10,9) w/ (6,7,9,10) shorted | 140mΩ max 195mΩ max 22mΩ max | (1-3:4-5) (1-3:7,6-10,9) w/ (6,7,9,10) shorted | 2.375 ± 3%:1 3.166 ± 3%:1 | 36 V – 57 V 220 kHz | 12 V 2.1 A |
| ① POE-EPA13 -30W-001 | (1-3) @ 100 kHz / 0.1 V | 70uH ± 10% | (1-3) w/ (6,7,9,10) shorted @ 100 kHz / 0.1 V | 1.4uH max | (1-3) (4-5) (6,7-9,10) w/ (6,7,9,10) shorted | 93mΩ max 166mΩ max 4.45mΩ max | (1-3:4-5) (1-3:6,7-9,10) w/ (6,7,9,10) shorted | 3.14 ± 3%:1 7.33 ± 3%:1 | 33 V – 57 V 200 kHz | 5 V 6 A |
| ② POE-EPA13 -70W-001 | (1-3) @ 100 kHz / 0.1 V | 100uH ± 15% | (1-3) w/ (4,5,6,7,9,10) shorted @ 100 kHz / 0.1 V | 0.22uH max | (1-3) (1-2) (4-5) (6-9) (7-10) | 33mΩ max 221mΩ max 135mΩ max 6.6mΩ max 6.6mΩ max | (1-3:1-2) (1-3:4-5) (1-3:6-9) (1-3:7-10) | 1 ± 3%:1 1.43 ± 3%:1 3.33 ± 3%:1 3.33 ± 3%:1 | 41 V – 57 V 200 kHz | 5 V 14 A |
| ② POE-EPA13 -72W-001 | (1-3) @ 100 kHz / 0.1 V | 100uH ± 12% | (1-3) w/ (4,5,6,7,9,10) shorted @ 100 kHz / 0.1 V | 0.24uH max | (1-3) (1-2) (4-5) (6-9) (7-10) | 49mΩ max 240mΩ max 302mΩ max 36mΩ max 34mΩ max | (1-3:1-2) (1-3:4-5) (1-3:6-9) (1-3:7-10) | 1 ± 3%:1 1.33 ± 3%:1 1.5 ± 3%:1 1.5 ± 3%:1 | 41 V – 57 V 200 kHz | 12 V 6 A |

Hi-Pot(Pri-Sec).....1500 Vac (60 Hz / 2 sec / 1 mA)
 Operating Temperature.....-40 °C to +105 °C
 Operating Temperature ①-40 °C to +125 °C
 Operating Temperature ②-40 °C to +165 °C

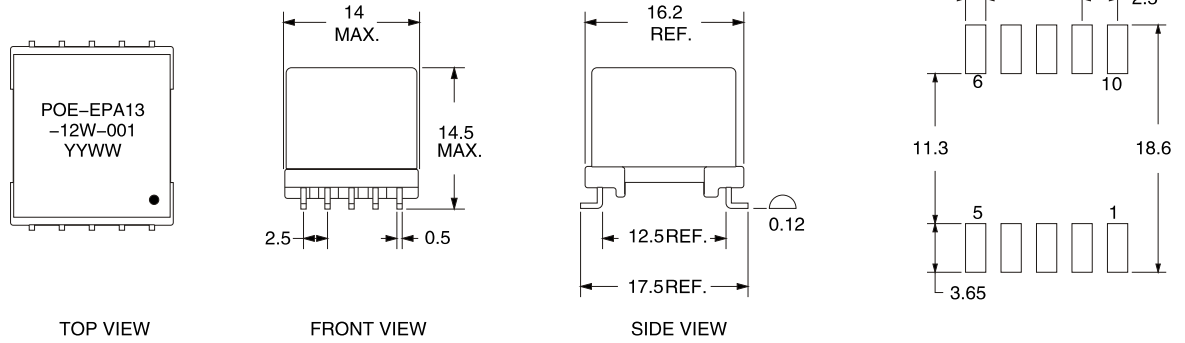
PHYSICAL CHARACTERISTICS:(mm)

LAYOUT:

POE-EP13

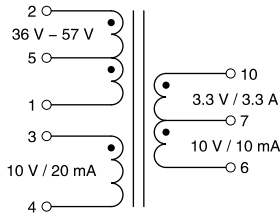


POE-EP13A

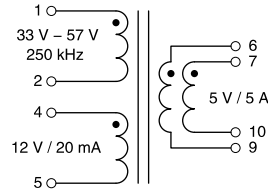


ELECTRICAL SCHEMATIC:

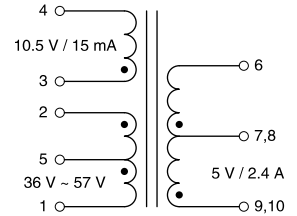
POE-EP13-12W-001



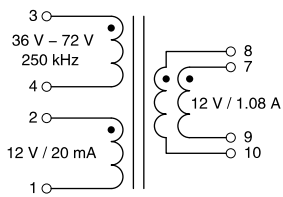
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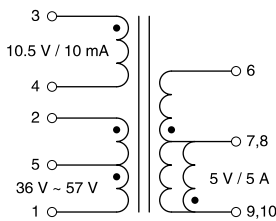
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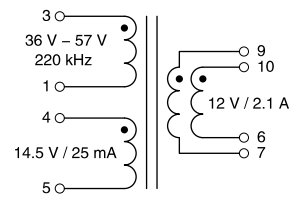
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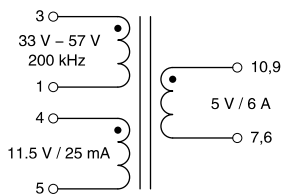
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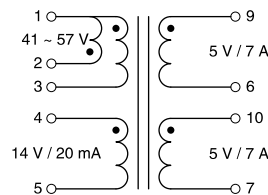
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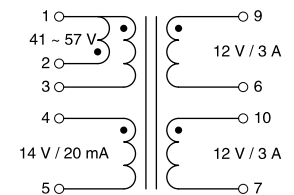
POE-EPA13-30W-001



POE-EPA13-70W-001



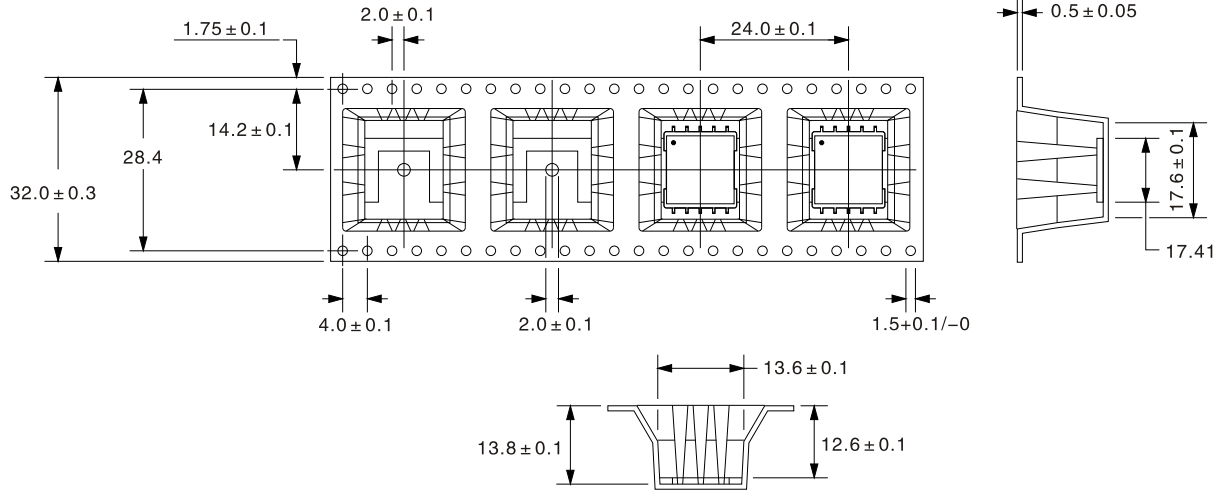
POE-EPA13-72W-001



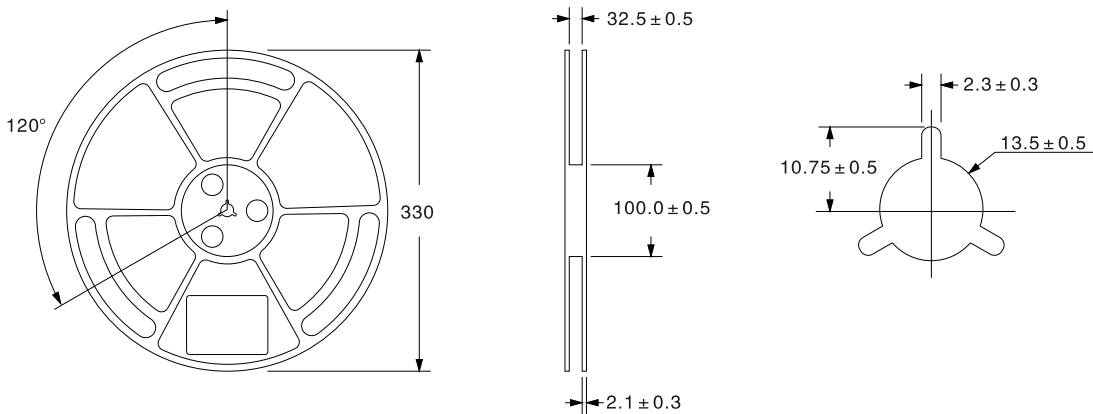
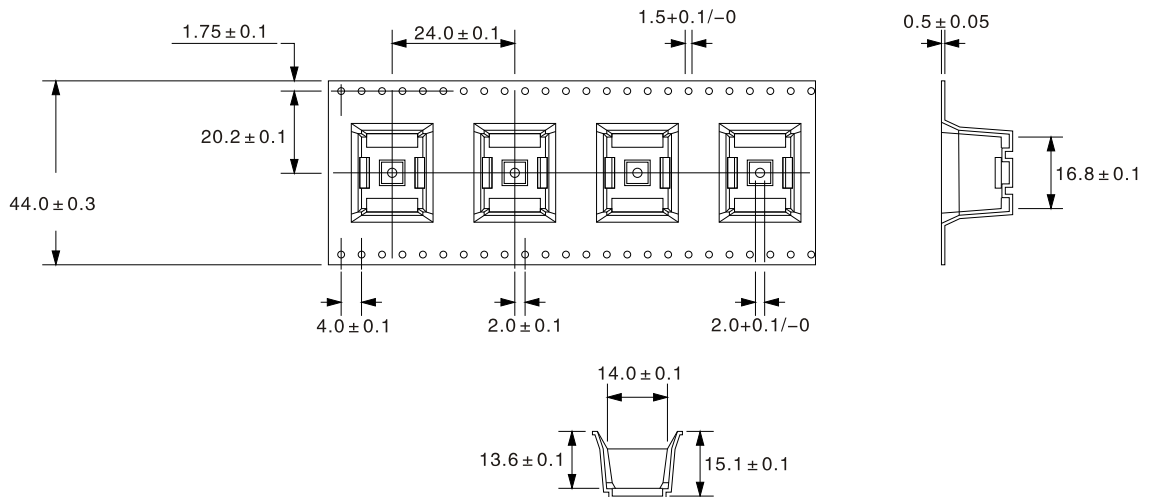
Secondary winding to be connected in parallel on PC board.

PACKAGING SPECIFICATIONS:(mm)

POE-EP13 180 pcs./reel, 3 reels/carton, 540 purchase.



POE-EP13A 150 pcs./reel, 2 reels/carton, 300 purchase.



SOLDERING PROFILE:

The duration from room temperature (25 °C) to peak temperature is 8 minutes maximum.

