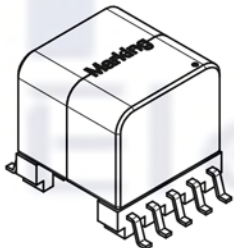
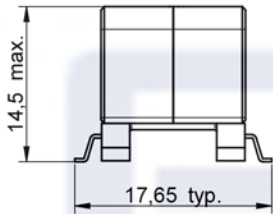
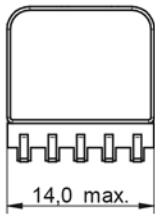
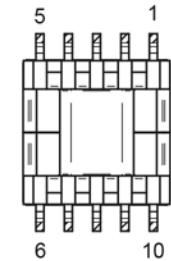
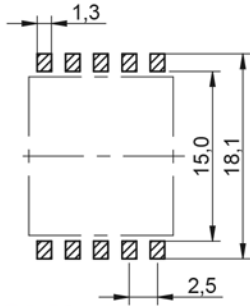


Dimensions: [mm]



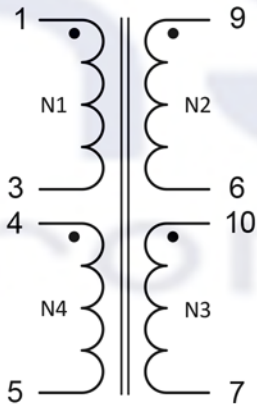
Scale - 1,5:1

Recommended Land Pattern: [mm]



Scale - 1,5:1

Schematic:



Electrical Properties:

| Properties              | Test conditions        |           | Value   | Unit   | Tol. |
|-------------------------|------------------------|-----------|---------|--------|------|
| Inductance              | 100 kHz/ 100 mV        | L         | 21      | μH     | ±10  |
| Turns Ratio             |                        | n         | 6:9:9:4 |        | ±3   |
| Saturation Current      | $ \Delta L/L  < 20 \%$ | $I_{SAT}$ | 6.4     | A      | typ. |
| DC Resistance 1         | @ 20 °C                | $R_{DC}$  | 25      | mΩ     | max. |
| DC Resistance 2         | @ 20 °C                | $R_{DC}$  | 144     | mΩ     | max. |
| DC Resistance 3         | @ 20 °C                | $R_{DC}$  | 144     | mΩ     | max. |
| DC Resistance 4         | @ 20 °C                | $R_{DC}$  | 144     | mΩ     | max. |
| Leakage Inductance      | 100 kHz/ 100 mV        | $L_S$     | 1       | μH     | max. |
| Insulation Test Voltage | prim => sec            | $U_T$     | 1500    | V (AC) |      |
| Insulation Test Voltage | N2 => N3, N1 => N4     | $U_{T2}$  | 500     | V (AC) |      |

General Information:

|                                                                                                            |                      |
|------------------------------------------------------------------------------------------------------------|----------------------|
| It is recommended that the temperature of the component does not exceed +125°C under worst case conditions |                      |
| Operating Temperature                                                                                      | -40 °C up to +125 °C |
| Storage Temperature (in original packaging)                                                                | -40 °C up to +60 °C  |
| Test conditions of Electrical Properties: +20°C, 33% RH if not specified differently                       |                      |

Shaanxi FKS Electronic Parts Import&Export Co.,Ltd.  
FKS(Xi'an) Electronic Technology Co.,Ltd.  
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Tel: +86-29-8868 5333  
Fax: +86-29-8868 0913



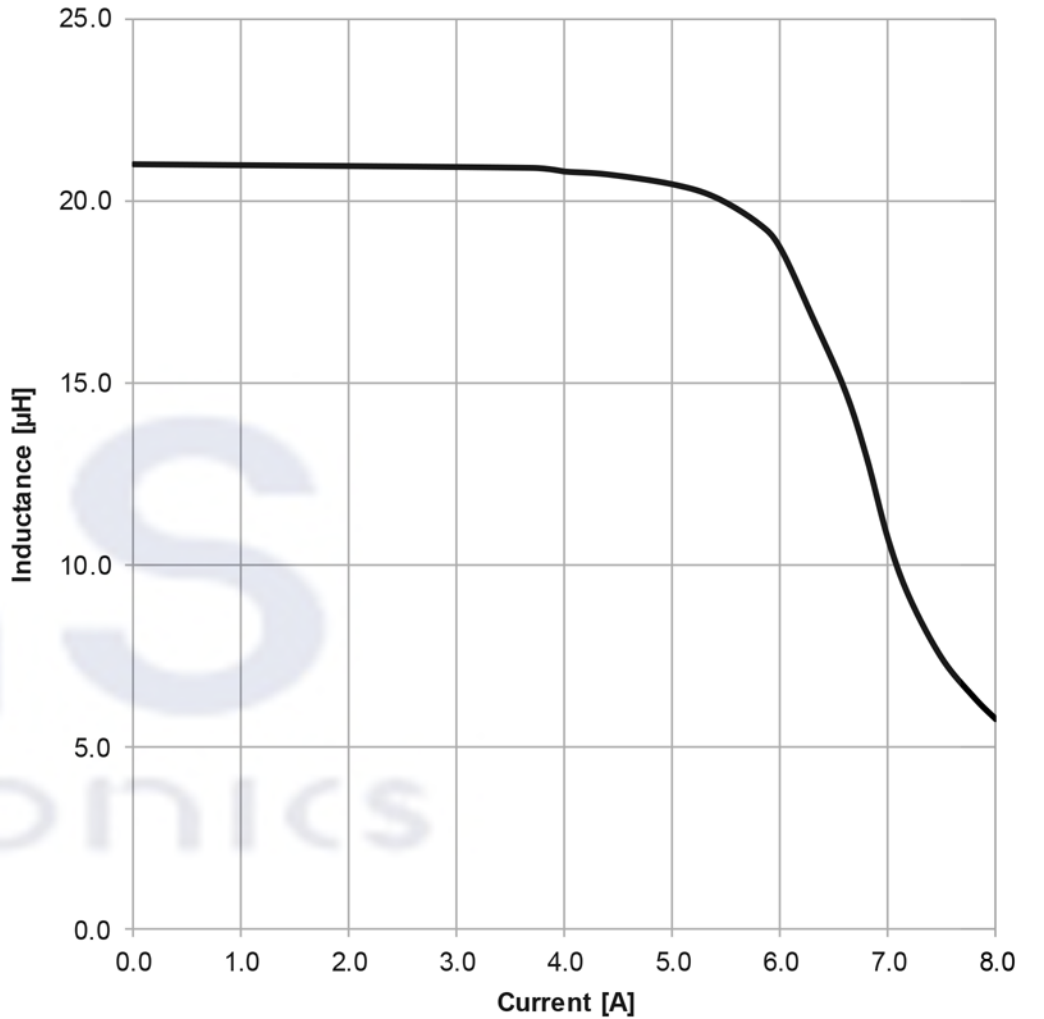
|                                                                      |                     |                                      |                       |
|----------------------------------------------------------------------|---------------------|--------------------------------------|-----------------------|
| CREATED<br>KaS                                                       | CHECKED<br>TBr      | GENERAL TOLERANCE<br>DIN ISO 2768-1m | PROJECTION METHOD<br> |
| DESCRIPTION<br><b>Power over Ethernet<br/>High Power Transformer</b> |                     | ORDER CODE<br><b>FKS7491195224</b>   |                       |
| SIZE<br>EPQ13                                                        | REVISION<br>001.000 | STATUS<br>Draft                      | DATE<br>2015-11-10    |
| BUSINESS UNIT<br>eISos                                               |                     | PAGE<br>1/5                          |                       |

Application Properties:

| Properties                      |                     | Value               | Unit |
|---------------------------------|---------------------|---------------------|------|
| Input Voltage <sup>1)</sup>     | U <sub>I</sub>      | 9 V (DC) - 57 V(DC) |      |
| Output Voltage 1 <sup>2)</sup>  | U <sub>O1</sub>     | 24                  | V    |
| Output Current 1 <sup>3)</sup>  | I <sub>O1</sub>     | 0.5                 | A    |
| Output Voltage 2 <sup>4)</sup>  | U <sub>O2</sub>     | 24                  | V    |
| Output Current 2 <sup>5)</sup>  | I <sub>O2</sub>     | 0.5                 | A    |
| Auxiliary Voltage <sup>6)</sup> | U <sub>aux</sub>    | 10                  | V    |
| Switching Frequency             | f <sub>switch</sub> | 200-400             |      |

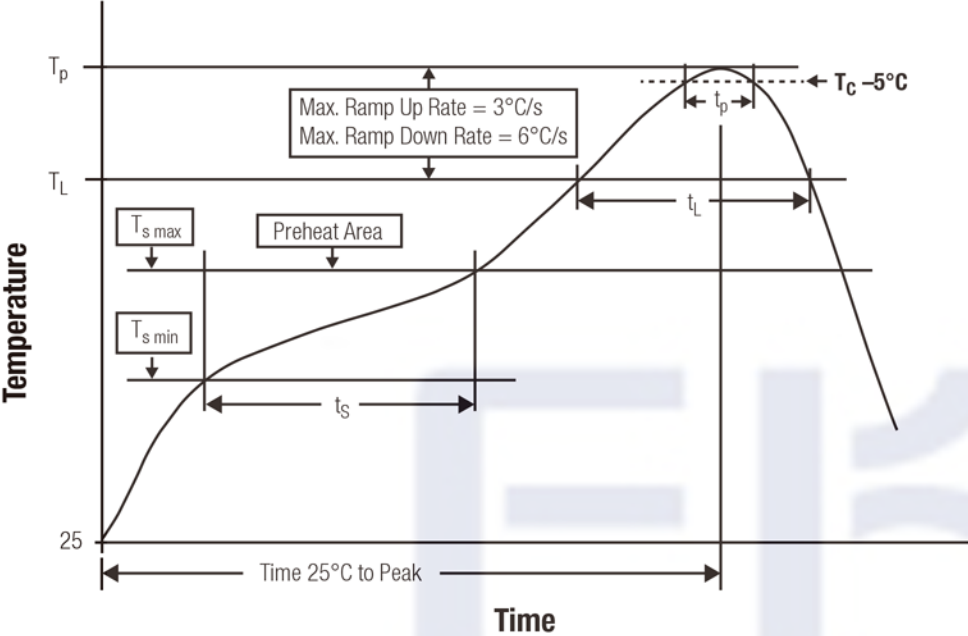
- 1) N1  
2) N2  
3) N2  
4) N3  
5) N3  
6) N4

Typical Inductance vs. Current Characteristics:



|                                                                                                                                                                                                                                                                        |  |  |                                                                      |                     |                                      |                                                                                                               |                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|----------------------------------------------------------------------|---------------------|--------------------------------------|---------------------------------------------------------------------------------------------------------------|------------------------|
| Shaanxi FKS Electronic Parts Import&Export Co.,Ltd.<br>FKS(Xi'an) Electronic Technology Co.,Ltd.<br>Adress: B1 Building,Western Cloud Valley,Fengxi New Town,<br>Xixian New Area,Xi'an City, Shaanxi Province,China.<br>Tel: +86-29-8868 5333<br>Fax: +86-29-8868 0913 |  |  | CREATED<br>KaS                                                       | CHECKED<br>TBr      | GENERAL TOLERANCE<br>DIN ISO 2768-1m | PROJECTION<br>METHOD<br> |                        |
|                                                                                              |  |  | DESCRIPTION<br><b>Power over Ethernet<br/>High Power Transformer</b> |                     |                                      | ORDER CODE<br>FKS7491195224                                                                                   |                        |
|                                                                                                                                                                                                                                                                        |  |  | SIZE<br>EPQ13                                                        | REVISION<br>001.000 | STATUS<br>Draft                      | DATE<br>2015-11-10                                                                                            | BUSINESS UNIT<br>eISos |
|                                                                                                                                                                                                                                                                        |  |  |                                                                      |                     |                                      | PAGE<br>2/5                                                                                                   |                        |

Classification Reflow Profile for SMT components:



Classification Reflow Soldering Profile:

| Profile Feature                                      |              | Value             |
|------------------------------------------------------|--------------|-------------------|
| Preheat Temperature Min                              | $T_{s\ min}$ | 150 °C            |
| Preheat Temperature Max                              | $T_{s\ max}$ | 200 °C            |
| Preheat Time $t_s$ from $T_{s\ min}$ to $T_{s\ max}$ | $t_s$        | 60 - 120 seconds  |
| Ramp-up Rate ( $T_L$ to $T_p$ )                      |              | 3 °C/ second max. |
| Liquidous Temperature                                | $T_L$        | 217 °C            |
| Time $t_L$ maintained above $T_L$                    | $t_L$        | 60 - 150 seconds  |
| Peak package body temperature                        | $T_p$        | see table below   |
| Time within 5°C of actual peak tempaure              | $t_p$        | 20 - 30 seconds   |
| Ramp-down Rate ( $T_L$ to $T_p$ )                    |              | 6 °C/ second max. |
| Time 25°C to peak temperature                        |              | 8 minutes max.    |

refer to IPC/ JEDEC J-STD-020E

Package Classification Reflow Temperature:

| Properties                                           | Volume mm <sup>3</sup><br><350 | Volume mm <sup>3</sup><br>350-2000 | Volume mm <sup>3</sup><br>>2000 |
|------------------------------------------------------|--------------------------------|------------------------------------|---------------------------------|
| PB-Free Assembly I Package Thickness < 1.6 mm        | 260 °C                         | 260 °C                             | 260 °C                          |
| PB-Free Assembly I Package Thickness 1.6 mm - 2.5 mm | 260 °C                         | 250 °C                             | 245 °C                          |
| PB-Free Assembly I Package Thickness ≥ 2.5 mm        | 250 °C                         | 245 °C                             | 245 °C                          |

refer to IPC/ JEDEC J-STD-020E

|                                                                                                                                                                                                                                                                        |                     |                 |                |                                      |                                                                                                            |             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------|----------------|--------------------------------------|------------------------------------------------------------------------------------------------------------|-------------|
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| DESCRIPTION<br><b>Power over Ethernet<br/>High Power Transformer</b>                                                                                                                                                                                                   |                     |                 |                | ORDER CODE<br><b>FKS7491195224</b>   |                                                                                                            |             |
|                                                                                                                                                                                                                                                                        |                     |                 |                |                                      |                                                                                                            |             |
| SIZE<br>EPQ13                                                                                                                                                                                                                                                          | REVISION<br>001.000 | STATUS<br>Draft |                | DATE<br>2015-11-10                   | BUSINESS UNIT<br>eISos                                                                                     | PAGE<br>3/5 |

