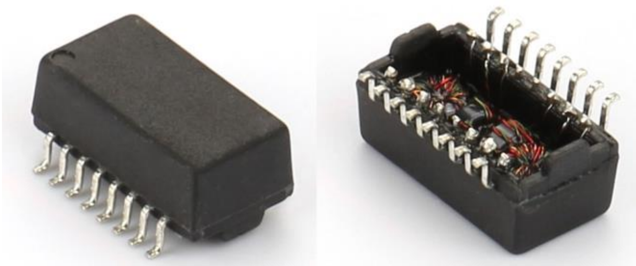
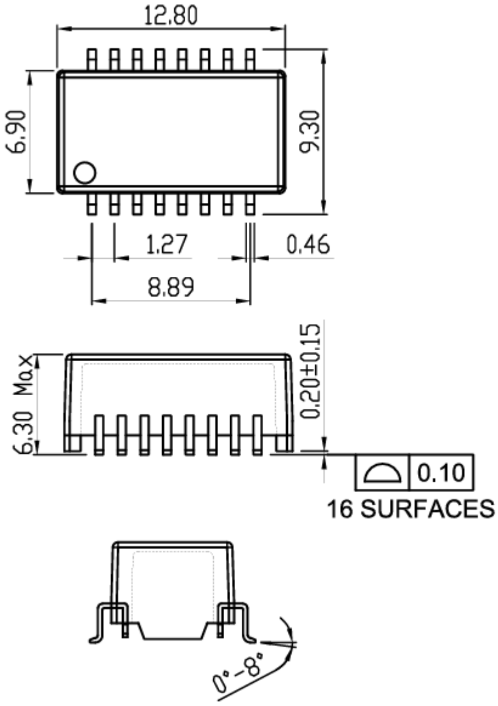
OWTG-E16S1001NK-M100
10/100M Base-T
SMD Lan Transformer





GENERAL INFORMATION

- Operation Temp: -40℃ to +85℃
- Storage condition: 0-40℃ and ≤70% (In original packaging)
- Test Condition: 100KHz, 0.1V
- Parameters test temperature: 25℃
- Reflow Soldering: 250℃ for 10 sec

FEATURES

- 10/100M Base-T
- Turns Ratio: 1CT:1CT
- 16PIN SMD Profile case
- Channels: 2
- POE: Non

APPLICATIONS

- Network Telecommunications device
- Computer and peripherals
- Servicer, Router, Switches, Modems, Notebook and PCs, Hubs, Printer, IP Camera, POS
- EPON/GPON, SDH/ATM.
- ADSL/VDSL,
- EOC
- PLC, DCS, SCADA , etc.

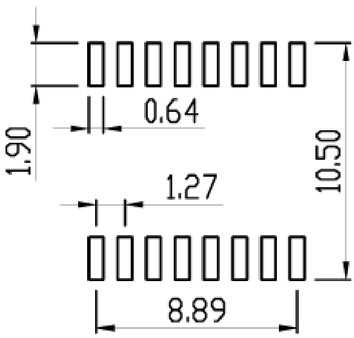
CERTIFICATION

- RoHS Approval: Complaint 2011/65/EU & 2015/863
- REACH Approval: IEC1907/2006
- UL 94V0: Approval
- IEEE802.3: Suitable

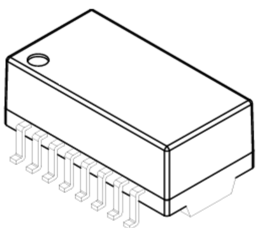
NOTICE

- MSL 1
- This electronic component was designed and manufactured for use in general electronic e equipment.
- Don't drop test or impact on the single component.
- Violation of the technical product specifications such as exceeding the nominal rated current may damage the product.

Recommended PAD



3D Review



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- **DIMENSIONS OF OWTG-E16S1001NK-M100 Base-T 10/100M SMD 16PIN Lan Transformer**

OW Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	F(mm)	G(mm)	H(mm)	I(mm)
OWTG-E16S1001NK-M100	12.8±0.3	6.9±0.3	6.30 Max.	9.3±0.5	0.2±0.15	8.89 Ref.	1.27Ref.	0.46Ref.	0.1 Max.

- **Schemtec of OWTG-E16S1001NK-M100 Base-T 10/100M SMD 16PIN Lan Transformer**
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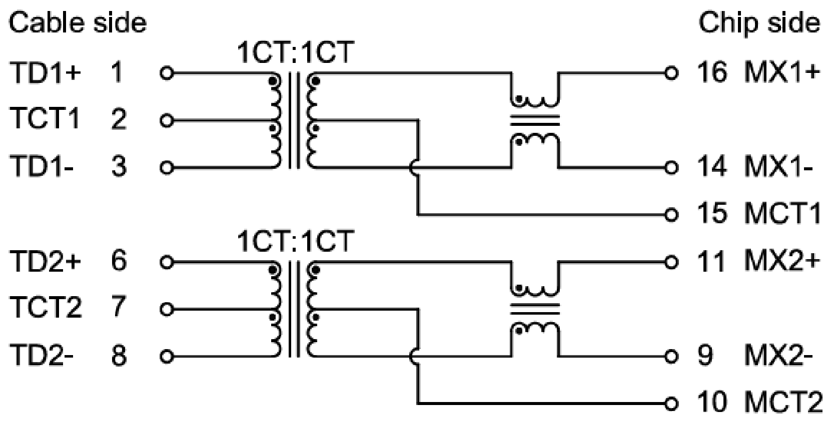

- **Electrical Characteristics of OWTG-E16S1001NK-M100 Base-T 10/100M SMD 16PIN Lan Transformer**
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No.	Item	Terminal No.	Specification	Test Condition
1	Inductance	Each Channel	350uH Min.	With 8mA DC Bias 100KHz 0.2v
2	Insertion Loss	Each Channel	-1.1dB Max	0.5-100MHz
3	Return Loss	Each Channel	-18dB Min.	0.5-30MHz
		Each Channel	-15dB Min.	30-60MHz
		Each Channel	-12dB Min.	60-80MHz
4	CMRR	Each Channel	-35dB Min.	0.5-40MHz
		Each Channel	-30dB Min.	40-100MHz
5	Cross Talk	Each Channel	-35dB Min.	0.5-40MHz
		Each Channel	-27dB Min.	40-100MHz
6	Turns Ratio	1CT : 1CT	1:1 +/-5%	10KHz 0.2V
7	DCR	Pin to Pin	1.2Ω Max.	25℃
8	Hi-pot	Pri. to Sec.	1500Vac 1mA 6s	/
9	Leakage inductance	Each Channel	0.5µH MAX	100KHz 0.2V
10	CAP	/	28pF Max	100KHz 0.2V

Note:
1) **Please contact sales if your requirement is beyond the characteristics list by sales@owolff.com**
2) **Marking: OWTG-E16S1001NK-M100, Date Code**

- **Recommend Wave Soldering Condition of OWTG-E16S1001NK-M100 Base-T 10/100M SMD 16PIN Lan Transformer**
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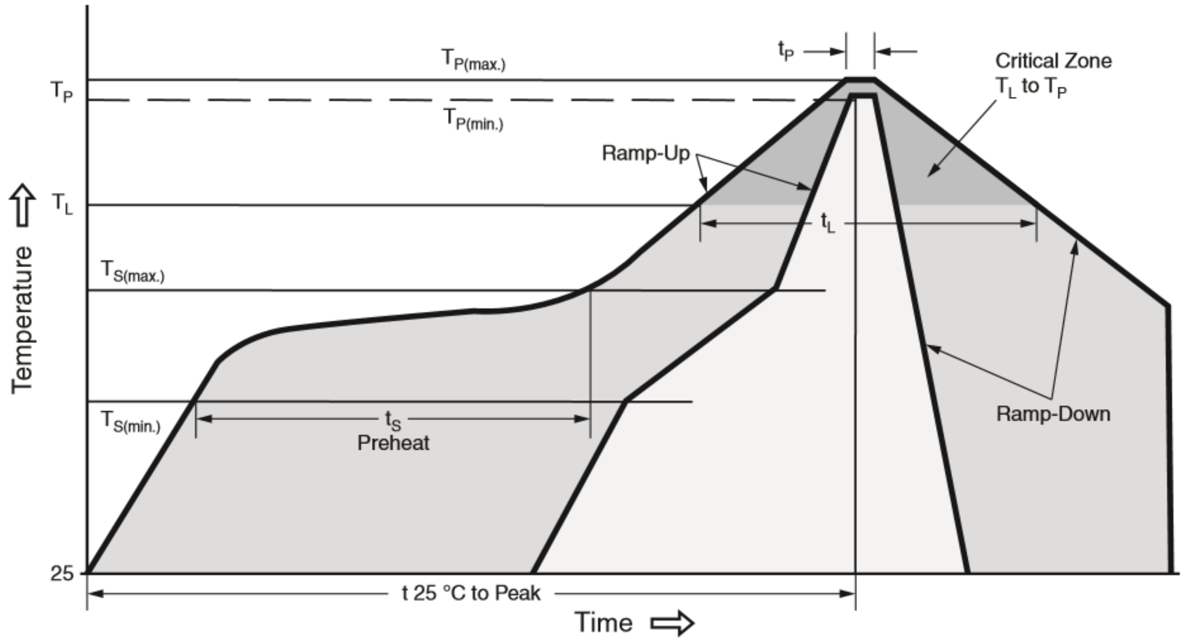
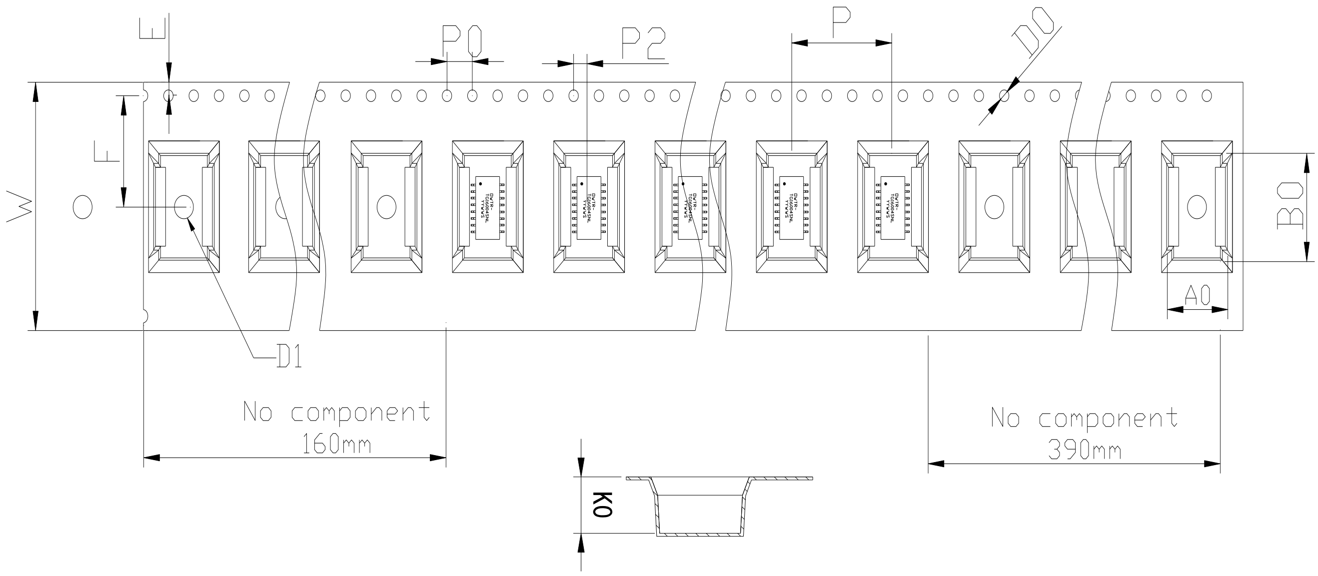


Profile Feature	LEAD (Pb)-FREE ASSEMBLY (e.g. SnAgCu)
Average ramp-up rate ($T_{(Smax.)}$ to T_P)	3 °C/s maximum
Preheat - Temperature minimum ($T_{S(min.)}$) - Temperature maximum ($T_{S(max.)}$) - Time ($T_{S(min.)}$ to $T_{S(max.)}$) (t_S)	 150 °C 200 °C 60 s to 120 s
Time maintained above - Temperature minimum (T_L) - Time (T_L)	 217 °C 60 s to 120 s
Minimum peak temperature ($T_{P(min.)}$)	235 °C
Recommended peak temperature (T_P)	245 °C
Maximum peak temperature ($T_{P(max.)}$)	250 °C
Time within 5 °C of actual peak temperature (t_P)	5 s to 10 s
Ramp-down rate	6 °C/s maximum
Time 25 °C to peak temperature	6 min maximum

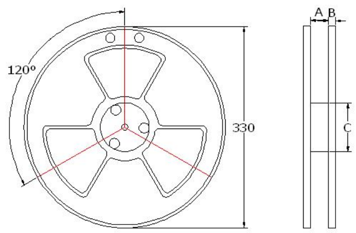
Notice:

- Refer to IPC/J-STD-020E
- Above mentioned information should serve as recommendation only. Other parameters may also affect soldering results, so these profiles do not guarantee absolute success.
- Soldering profile should be determined by the manufacturer of the solder paste, providing there is no contradiction with the recommendations in this document.
- Strong forces which may affect the coplanarity of the components' electrical connection with the PCB (i.e. pins), can damage the part.
- Washing during the production to clean the customer application may damage or change the characteristics of the wire insulation, marking or plating. Washing may have a negative effect on the long-term functionality of the product.Customer need to be own evaluation risk.
- We do not recommend using brush PCBA during the cleaning process after soldering.
- If the product is potted in the customer applications, the potting material mabye shrink or expand after hardening, and lead to the part's electrical characteristics change or core crack, customer need to own evaluation the potting risk.

➢ Packaging Detail of OWTG-E16S1001NK-M100 Base-T 10/100M SMD 16PIN Lan Transformer



OW P/N	W	A0	B0	K0	P	P0	P2	F	E	D0/D1
OWTG-E16S1001NK-M100	24.0	9.70	12.9	6.00	16.0	4.0	2.0	11.5	1.75	1.5



OW P/N	A	B	C	Reel(Pcs)
OWTG-E16S1001NK-M100	24.5	2.30	100	600

Notice:

- Comply with EIA-418, the Peeling-off force range 20gf to 120gf,
- A stroage of OW products for longer than 12months is not recommended, the terminals may suffer degradation during storaging, then the resulting in bad soldering performacne. Customer need to be pre-evaluated the solderability before using over 12months inventory.
- Do not expose the compoent to direct sunlight, or to high humidity ambinet.
- The stroage conditions is in the original packaging are defined according to EN61670-2, 12months shelf life Max. is in original packaging.
- It has to be clearly pointed out that the possibility of a malfunction of electronic components or failure before the end of the usual lifetime .cannot be completely eliminated in the current state of the art, even if the products are operated within the range of the specifications.
- The temperature rise of the component must be taken into consideration. The operating temperature is comprised of ambient temperature and temperature rise of the components .The operating temperature of the component shall not exceed the maximum temperature specified.
- Please hand it carefully because it is fragile component. Please re-test and evaluate it again if the component dropped to floor.
- MSL 1 and vacuum packing per reel.

CAUTIONS AND NOTES

1. OW Lan Transformer Number Guidance

OWTG – X xx X xxxx X X – XXXX

- XXXX → Base-T: M100, G1.0, G2.5, G5.0, G10;G18;G25
- X → Special Code : K = Open header; T = Potting or base
- X → POE code: P=POE; N= Non POE
- xxxx → OW Lan transformer winding coil Schematic: 3 or 4 digit
- X → Pin type: S=SMD, D=Dip
- xx → PINs quantity: 50=50pins
- X → Application: D= Consuming; E= Industrial; A = Automative; M = Medical
- OWTG → OW Lan transformer Type

Note: Application operation temperature:

--D: 0-70℃

--E: -40 – 85℃

--A: -40 - 105℃ / 125℃

--M: -55 - 125℃