

TDK xDSL transformers IC cross reference

2001.Feb.16 Rev. c

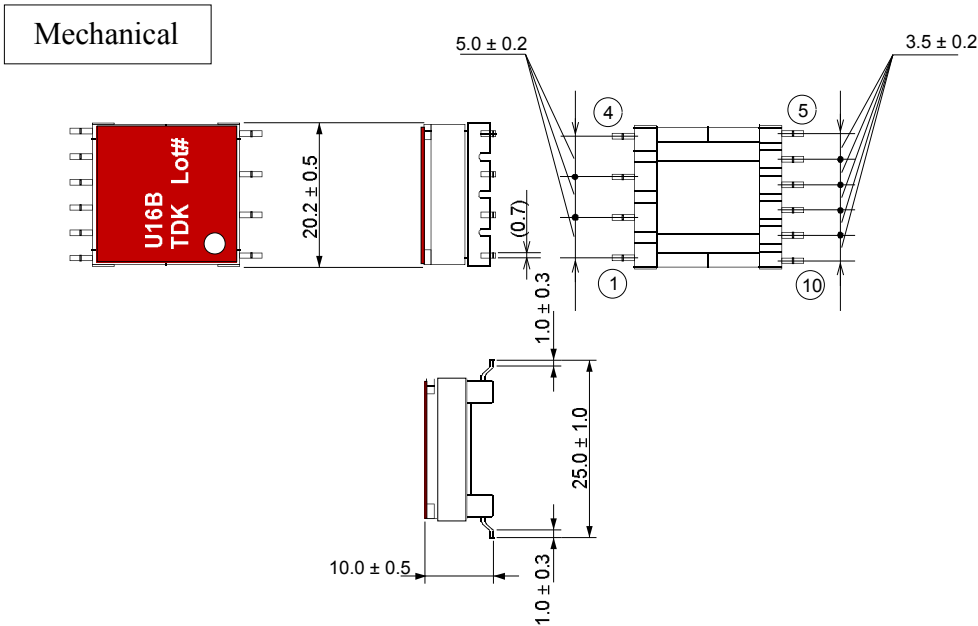
Safety Standard	UL1950 Basic Insulation , 120V working voltage EN60950 Supplementary Insulation , 250V working voltage	
	CO side	CP side
STMicroelectronics ST70135A, ST70134 (CPE)		TRTEPC19-U016B (540uH) (TRTEPC19-U016A will be discontinued) TRTEP13S-U027A015 (same function with EPC19) TRTEP13-0414D (with new line interface)

TDK ADSL transformers

STmicroelectronics ST70135A & ST70134 CPE Side

TRTEPC19-U016B 540uH

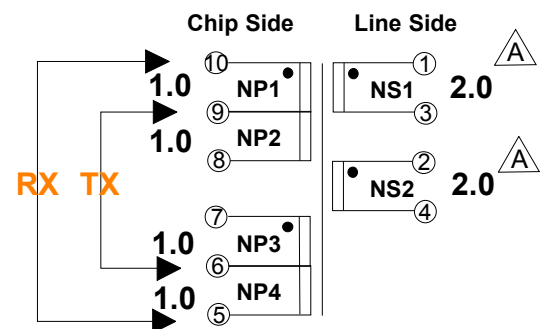
Corresponding to EN60950 Supplementary Insulation for 250V Working Voltage and to UL1950 Basic insulation for 120V working voltage.
1.3mm creepage distance , 2.0mm clearance distance



Electrical Specifications @25degreesC

1. Inductance 1-4(tied 2-3) : $540\mu\text{H} \pm 10\%$ at 10KHz , 0.1V
2. Leakage Inductance : $10.0 \mu\text{H}$ max at 100KHz , 0.1V
3. DCR
 - 1-4 (ties2-3) : $1.10 \Omega \pm 15\%$
 - 9-6 (tied8-7) : $610 \text{ m}\Omega \pm 15\%$
 - 10-5 (tied8-7) : $1.10 \Omega \pm 15\%$
4. Dielectric Withstanding : AC1,500Vrms 1minute
5. Total Harmonic Distortion : -65dB min. at 30KHz , 1Vrms

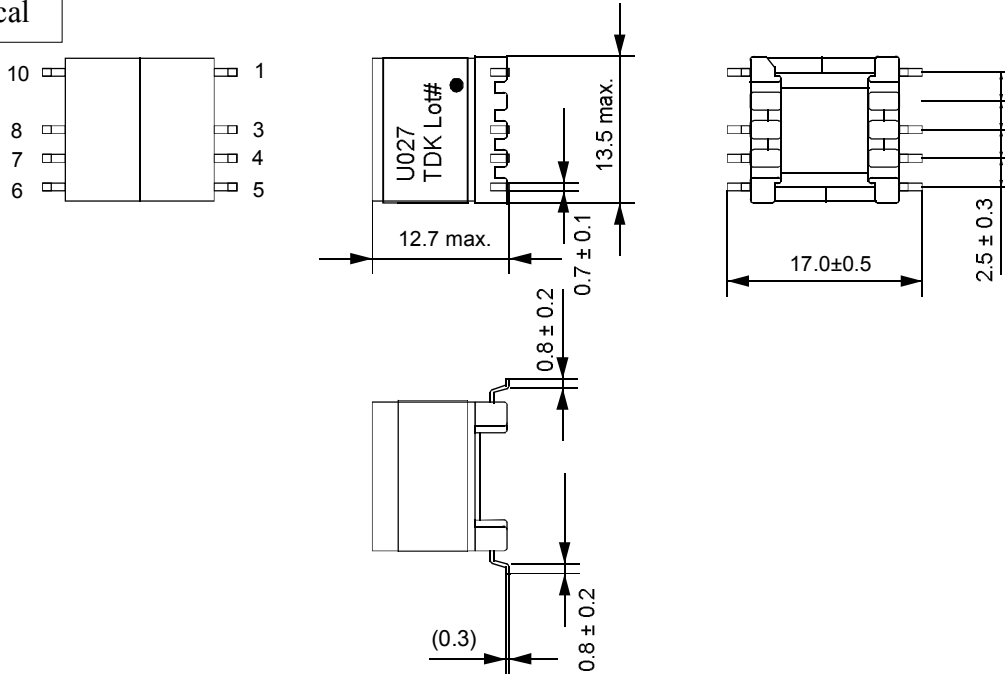
Schematics



TDK ADSL transformers
STmicroelectronics CPE Side
TRTEP13S-U027A015

Corresponding to EN60950 Supplementary Insulation for 250V Working Voltage and to UL1950 Basic insulation for 120V working voltage.
 1.3mm creepage distance , 2.0mm clearance distance

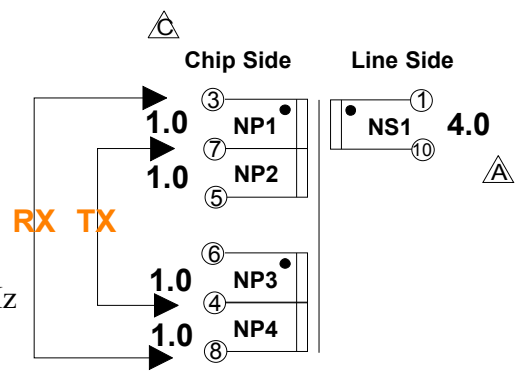
Mechanical



Electrical Specifications @25degreesC

Schematics

- | | |
|---------------------------------|------------------------------------|
| 1. Inductance 1-10 | : 470uH ± 10% at 10KHz , 0.1V |
| 2. Leakage Inductance | : 2.50 uH max at 100KHz , 0.1V |
| 3. DCR | |
| 1-10 | : 1.05 Ω ± 15% |
| 7-4(tied 5-6) | : 540 mΩ ± 15% |
| 3-8(tied 5-6) | : 1.10 Ω ± 15% |
| 4. Dielectric Withstanding | : AC1,500Vrms 1minute |
| 5. Total Harmonic Distortion | : -70dB min. at 100KHz , 1Vrms |
| 6. Return Loss | : 20.0 dB min. at 276KHz to 1.1MHz |
| 7. Insertion Loss | : 0.20 dB max. at 276KHz |
| 8. Frequency Response | : 0.20 dB at 1.1MHz (ref 276KHz) |
| 9. Longitudinal Conversion Loss | : -45dB min. at 1.1MHz |

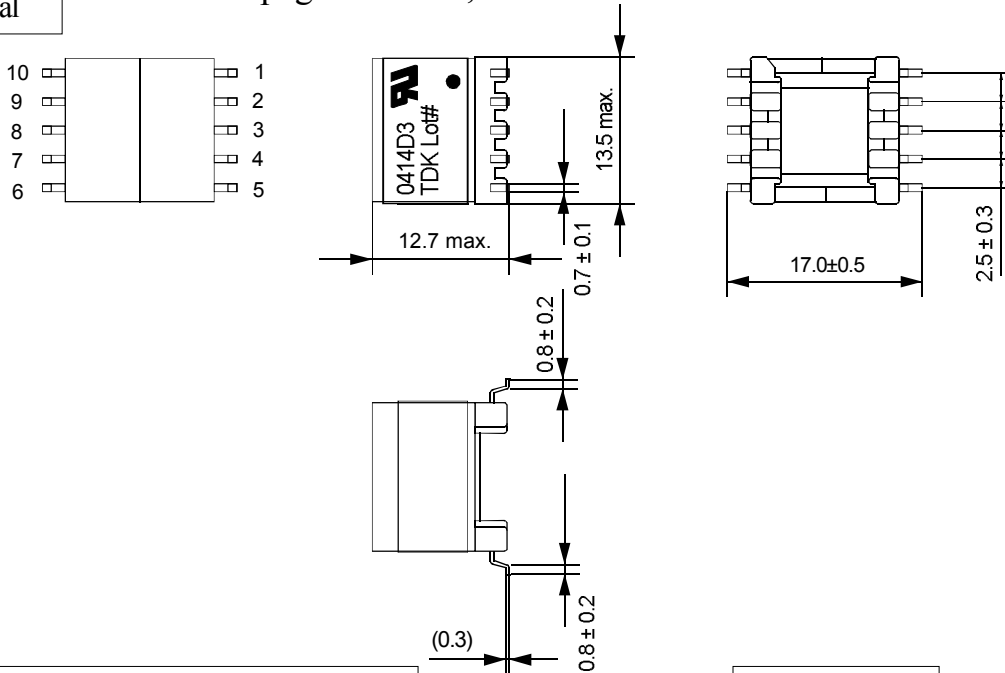


TDK ADSL transformers TRTEP13-0414D Rev3 (changed pin numbering)

Corresponding to EN60950 Supplementary Insulation for 250V Working Voltage
and to UL1950 Basic insulation for 120V working voltage.

1.3mm creepage distance , 2.0mm clearance distance

Mechanical



Electrical Specifications @25degreesC

1. Inductance 1-4 (tied 2-3) : 480uH +/- 10% at 10KHz,0.1Vrms,Ls
2. Leakage Inductance 1-4 (tied 2-3 , 10-8-9-7)
: 7.5 uH max at 100KHz,0.1Vrms,LS
3. DC Resistance

1-3	: 300 mΩ +/- 15%
2-4	: 300 mΩ +/- 15%
10-8	: 240 mΩ +/- 15%
9-7	: 240 mΩ +/- 15%
4. Dielectric Withstanding : AC 1.50KVrms 1minute

Schematics

