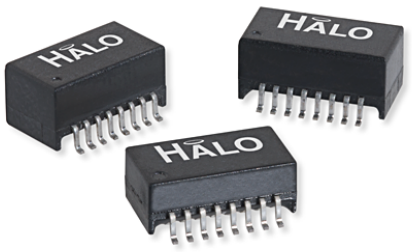
ULTRA™ Family of Transformers

SMD Single Port 10/100BASE-TX Transformer

HALO ELECTRONICS, INC.



US Patent Numbers:
5,656,985 6,297,721 B1
6,297,720 B1 6,320,489 B1
6,344,785 B1 6,662.431 B1

Product Features:

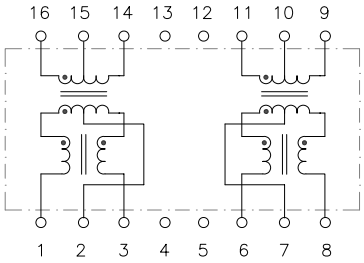
- ULTRA™, E-ULTRA™, and ULTRA-II™
- IEEE802.3u Compliant
- UL/EN60950 Recognized
- 100% Compliance Testing
- 1500Vrms Hi-Pot
- Patented Open Frame Construction

Part Number	Circuit	Package	Temp. Range	Turns Ratio ±3% (1-3:16-14)	Turns Ratio ±3% (6-8:11-9)	PRI/SEC Cw/w (pF)	PRI/SEC LL (µH max)	PRI DCR (Ω max)	Compliance
TG110-S050N2LF[1]	A	N2	0 to 70°C	1CT:1CT	1CT:1CT	35 max	0.4	0.9	Pb-Free
TG110-S050N2RL	A	N2	0 to 70°C	1CT:1CT	1CT:1CT	35 max	0.4	0.9	RoHS (7a)
TG110-S055N2LF[1]	B	N2	0 to 70°C	1CT:1CT	1CT:1CT	35 max	0.4	0.9	Pb-Free
TG110-S055N2RL	B	N2	0 to 70°C	1CT:1CT	1CT:1CT	35 max	0.4	0.9	RoHS (7a)
TG110-S120N2RL	B	N2	0 to 70°C	2CT:1CT	1CT:1CT	30 max	0.9	0.9	RoHS (7a)
TG110-S125N2RL	B	N2	0 to 70°C	1CT:1CT	2CT:1CT	35 max	0.4	0.9	RoHS (7a)
TG110-S131N2RL	B	N2	0 to 70°C	1.41CT:1CT	1CT:1CT	35 max	0.4	1.5	RoHS (7a)
TG110-S139N2RL	B	N2	0 to 70°C	1.25CT:1CT	1CT:1CT	15 typ	0.9	0.9	RoHS (7a)
TG110-S177N2RL	B	N2	0 to 70°C	1.41CT:1CT	1.41CT:1CT	30 max	0.6	0.9	RoHS (7a)
TG110-E050N5LF[1]	A	N5	-40 to +85°C	1CT:1CT	1CT:1CT	35 max	0.4	1.0	Pb-Free
TG110-E050N5RL	A	N5	-40 to +85°C	1CT:1CT	1CT:1CT	40 max	0.4	1.0	RoHS (7a)
TG110-E055N5LF[1]	B	N5	-40 to +85°C	1CT:1CT	1CT:1CT	35 max	0.4	1.0	Pb-Free
TG110-E055N5RL	B	N5	-40 to +85°C	1CT:1CT	1CT:1CT	40 max	0.4	1.0	RoHS (7a)
TG110-E120N5RL	B	N5	-40 to +85°C	2CT:1CT	1CT:1CT	40 max	0.9	1.3	RoHS (7a)
TG110-E125N5RL	B	N5	-40 to +85°C	1CT:1CT	2CT:1CT	40 max	0.9	1.1	RoHS (7a)
TG110-E139N5RL	B	N5	-40 to +85°C	1.25CT:1CT	1CT:1CT	30 typ	0.4	1.3	RoHS (7a)
TG110-S141N5RL	B	N5	0 to 70°C	1CT:1.41CT	1CT:1CT	35 typ	0.4	0.9	RoHS (7a)
TG110-3506N6RL[2]	C	N6	0 to 70°C	1CT:1CT	1CT:1CT	20 typ	0.4	1.3	RoHS (7a)
TG110-S101N6RL[2]	D	N6	0 to 70°C	1CT:1CT	1CT:1CT	20 typ	0.4	1.3	RoHS (7a)

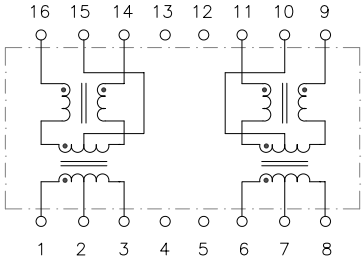
[1] Recommended for new designs using 1CT:1CT turns ratios
[2] Not for use in Auto-MDIX circuits/auto-transformer must be on the TX channel
* Contact you local representative or factory for part specific datasheets

HALO ULTRA 10/100BASE-TX Ethernet Transformers

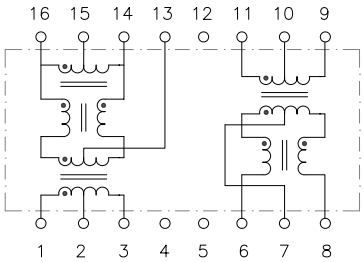
Circuit A



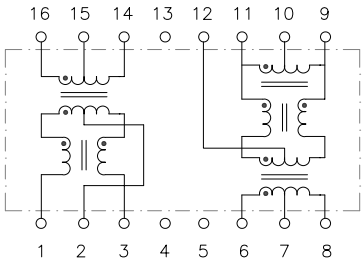
Circuit B



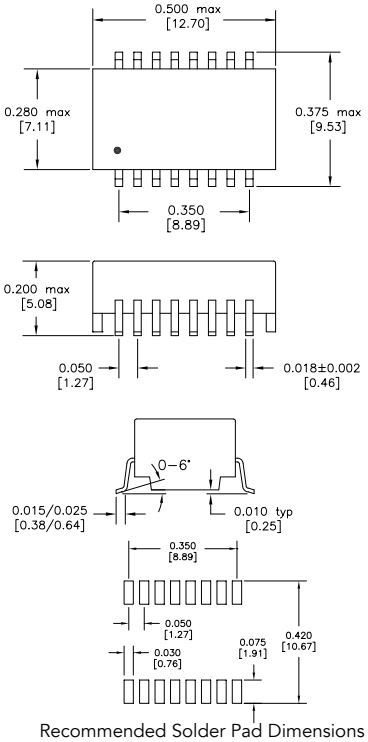
Circuit C



Circuit D

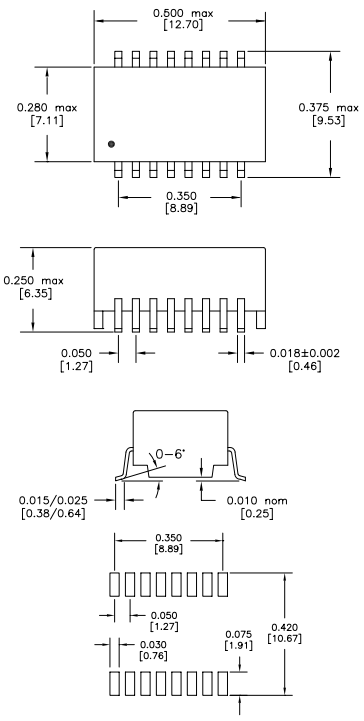


N2 Package



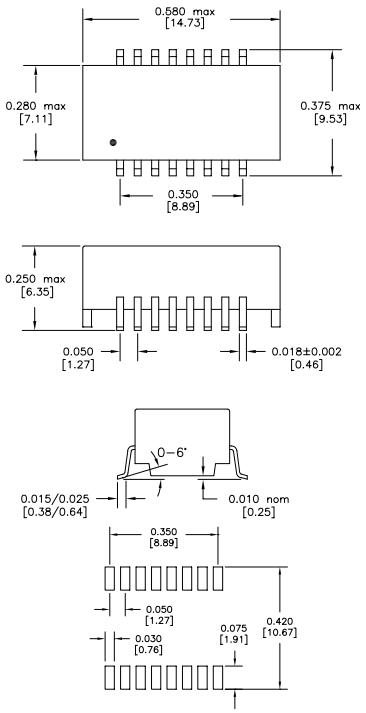
Recommended Solder Pad Dimensions

N5 Package



Recommended Solder Pad Dimensions

N6 Package



Recommended Solder Pad Dimensions

Dimensions: inch [mm]

Co-Planarity: 0.004 [0.10]

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HALO® Electronics is a leading supplier of high quality communication magnetics including signal transformers, filters, CMR chokes, PoE power transformers, DC/DC converters, and integrated Ethernet connectors. HALO's leading edge technology solutions are manufactured in ISO9001 and ISO14001 factories offering high quality products at a competitive price.

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