

T1/E1 Quatra™ Isolation Modules

SMD 4 Port T1/E1 Transformer



Product Features:

- T1/E1/CEPT/ISDN-PRI Quad Port Transformers
- UL/EN60950 Recognized
- DEMKO Recognized
- 100% Electrical Testing
- 1500Vrms Hi-Pot
- Patented Open Frame Construction

Standard Temp (0 to 70°C)		Turns Ratio (± 2%) PRI : SEC		Primary Pins		
Part Number	Circuit	TX	RX	TX	RX	RoHS
TG05-1205NXLf	B	1:2	1:2	See Circuit Diagram	See Circuit Diagram	Pb-Free
TG05-1205NXRL	B	1:2	1:2	See Circuit Diagram	See Circuit Diagram	RoHS (7a)
TG28-1205NXLf	F	1CT:1.36CT	1:1	1-3, 8-10, 11-13, 18-20	4-5, 6-7, 14-15, 16-17	Pb-Free
TG28-1205NXRL	F	1CT:1.36CT	1:1	1-3, 8-10, 11-13, 18-20	4-5, 6-7, 14-15, 16-17	RoHS (7a)
TG29-1205NXLf	A	1:2	1:2CT	1-2, 9-10, 11-12, 19-20	38-36, 35-33, 28-26, 25-23	Pb-Free
TG29-1205NXRL	A	1:2	1:2CT	1-2, 9-10, 11-12, 19-20	38-36, 35-33, 28-26, 25-23	RoHS (7a)
TG39-1205NXLf	B	1:1.15	1:1.15	See Circuit Diagram	See Circuit Diagram	Pb-Free
TG39-1205NXRL	B	1:1.15	1:1.15	See Circuit Diagram	See Circuit Diagram	RoHS (7a)

Extended Temp (-40 to +85°C)		Turns Ratio (± 2%) PRI : SEC		Primary Pins		
Part Number	Circuit	TX	RX	TX	RX	RoHS
TG23-1505NXLf	B	1:2.42	1:2.42	See Circuit Diagram	See Circuit Diagram	Pb-Free
TG23-1505NXRL	B	1:2.42	1:2.42	See Circuit Diagram	See Circuit Diagram	RoHS (7a)
TG27-1505NXLf	E	1:1.36	1:2CT	1-2, 6-7, 11-12, 16-17	38-36, 33-31, 28-26, 23-21	Pb-Free
TG27-1505NXRL	E	1:1.36	1:2CT	1-2, 6-7, 11-12, 16-17	38-36, 33-31, 28-26, 23-21	RoHS (7a)
TG29-1505NXLf	A	1:2	1:2CT	1-2, 9-10, 11-12, 19-20	38-36, 35-33, 28-26, 25-23	Pb-Free
TG29-1505NXRL	A	1:2	1:2CT	1-2, 9-10, 11-12, 19-20	38-36, 35-33, 28-26, 25-23	RoHS (7a)
TG34-1505NXLf	G	1:1.14/1.35	1:1.14/1.35	1-2, 6-7, 11-12, 16-17	37-36, 32-31, 27-26, 22-21	Pb-Free
TG34-1505NXRL	G	1:1.14/1.35	1:1.14/1.35	1-2, 6-7, 11-12, 16-17	37-36, 32-31, 27-26, 22-21	RoHS (7a)
TG36-1505NXLf	C	1:1.15	1:1	1-2, 6-7, 11-12, 16-17	3-4, 8-9, 13-14, 18-19	Pb-Free
TG36-1505NXRL	C	1:1.15	1:1	1-2, 6-7, 11-12, 16-17	3-4, 8-9, 13-14, 18-19	RoHS (7a)

Notes:

1. Pb-Free parts are RoHS 6/6 compliant. RoHS (7a) parts contain lead per exemption 7a.
2. Parts with RL suffix are not recommended for new designs.
3. Please contact the factory or representative for individual datasheets or additional information.

T1/E1 Quatra™ Isolation Modules

SMD 4 Port T1/E1 Transformer



Extended Temp (-40 to +85°C)		Turns Ratio (± 2%) PRI : SEC		Primary Pins		
Part Number	Circuit	TX	RX	TX	RX	RoHS
TG37-1505NXLf	B	1:1.14	1:1.14	See Circuit Diagram	See Circuit Diagram	Pb-Free
TG37-1505NXRL	B	1:1.14	1:1.14	See Circuit Diagram	See Circuit Diagram	RoHS (7a)
TG37-5176NXLf	D	1:1.14CT	1:1.14CT	4-5, 9-10, 14-15, 19-20	40-39, 35-34, 30-29, 25-24	Pb-Free
TG37-5176NXRL	D	1:1.14CT	1:1.14CT	4-5, 9-10, 14-15, 19-20	40-39, 35-34, 30-29, 25-24	RoHS (7a)
TG39-1505NXLf	B	1:1.15	1:1.15	See Circuit Diagram	See Circuit Diagram	Pb-Free
TG39-1505NXRL	B	1:1.15	1:1.15	See Circuit Diagram	See Circuit Diagram	RoHS (7a)
TG42-1505NXLf	C	1:1.41	1:1.41	1-2, 6-7, 11-12, 16-17	38-37, 33-22, 28-27, 23-22	Pb-Free
TG42-1505NXRL	C	1:1.41	1:1.41	1-2, 6-7, 11-12, 16-17	38-37, 33-22, 28-27, 23-22	RoHS (7a)
TG49-LVL1NXLf	D	1:2CT	1CT:2	4-5, 9-10, 14-15, 19-20	1-3, 6-8, 11-13, 16-18	Pb-Free
TG49-LVL1NXRL	D	1:2CT	1CT:2	4-5, 9-10, 14-15, 19-20	1-3, 6-8, 11-13, 16-18	RoHS (7a)
TG63-1505NXLf	E	1:1.15	1:2CT	1-2, 6-7, 11-12, 16-17	38-36, 33-31, 28-26, 23-21	Pb-Free
TG63-1505NXRL	E	1:1.15	1:2CT	1-2, 6-7, 11-12, 16-17	38-36, 33-31, 28-26, 23-21	RoHS (7a)
TG63-S003NXLf	C	1:1.15	1:2	3-4, 8-9, 13-14, 18-19	1-2, 6-7, 11-12, 16-17	Pb-Free
TG63-S003NXRL	C	1:1.15	1:2	3-4, 8-9, 13-14, 18-19	1-2, 6-7, 11-12, 16-17	RoHS (7a)
TG64-1505NXLf	G	1:1/1.26	1:2CT	1-2, 6-7, 11-12, 16-17	37-36, 32-31, 27-26, 22-21	Pb-Free
TG64-1505NXRL	G	1:1/1.26	1:2CT	1-2, 6-7, 11-12, 16-17	37-36, 32-31, 27-26, 22-21	RoHS (7a)
TG70-1505NXLf	D	1:1.36CT	1:1.36CT	4-5, 9-10, 14-15, 19-20	40-39, 35-34, 30-29, 25-24	Pb-Free
TG70-1505NXRL	D	1:1.36CT	1:1.36CT	4-5, 9-10, 14-15, 19-20	40-39, 35-34, 30-29, 25-24	RoHS (7a)
TG73-1505NXLf	C	1:2.3	1:1	3-4, 8-9, 13-14, 18-19	1-2, 6-7, 11-12, 16-17	Pb-Free
TG73-1505NXRL	C	1:2.3	1:1	3-4, 8-9, 13-14, 18-19	1-2, 6-7, 11-12, 16-17	RoHS (7a)
TG80-1505NXLf	G	1:2.45CT	1:2.45CT	1-2, 6-7, 11-12, 16-17	37-36, 32-31, 27-26, 22-21	Pb-Free
TG80-1505NXRL	G	1:2.45CT	1:2.45CT	1-2, 6-7, 11-12, 16-17	37-36, 32-31, 27-26, 22-21	RoHS (7a)
TG83-1505NXLf	C	1:2	1:1	1-2, 6-7, 11-12, 16-17	37-36, 32-31, 27-26, 22-21	Pb-Free
TG83-1505NXRL	C	1:2	1:1	1-2, 6-7, 11-12, 16-17	37-36, 32-31, 27-26, 22-21	RoHS (7a)
TG87-S004NXLf	E	1:2CT	1:1	38-36, 33-31, 28-26, 23-21	1-2, 6-7, 11-12, 16-17	Pb-Free
TG87-S004NXRL	E	1:2CT	1:1	38-36, 33-31, 28-26, 23-21	1-2, 6-7, 11-12, 16-17	RoHS (7a)

Notes:

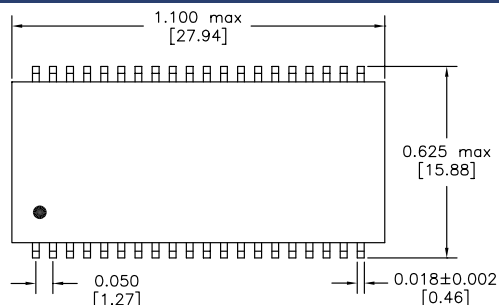
1. Pb-Free parts are RoHS 6/6 compliant. RoHS (7a) parts contain lead per exemption 7a.
2. Parts with RL suffix are not recommended for new designs.
3. Please contact the factory or representative for individual datasheets or additional information.

	Standard Temp	Extended Temp
OCL:	1.2mH (typ)	1.5mH (typ)
DCR:	0.7Ω (max)	0.8Ω (max)
LL:	0.4μF (max)	0.5μF (max)

Electrical Specifications @ 25°C

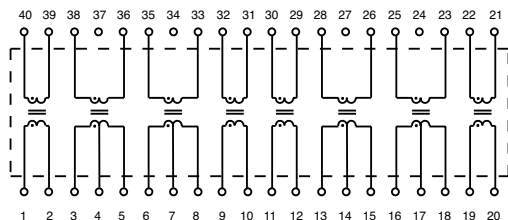
For additional information contact your [local representative](#), or HALO's support staff at (650) 903-3800 or info@haloelectronics.com

HALO Quatra™ T1/E1 Transformer

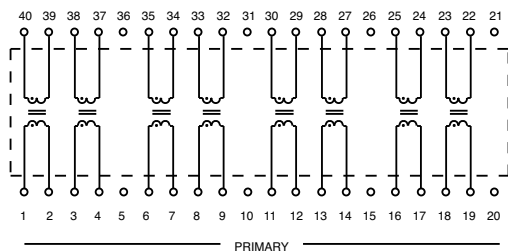


Dimensions: inch [mm]
Co-Planarity: 0.004 [0.10]

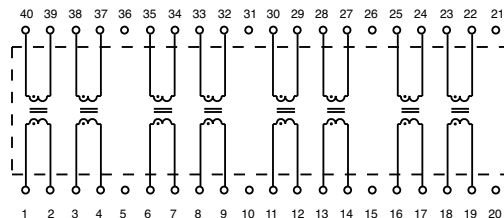
Circuit A



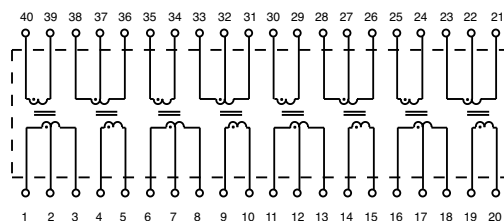
Circuit B



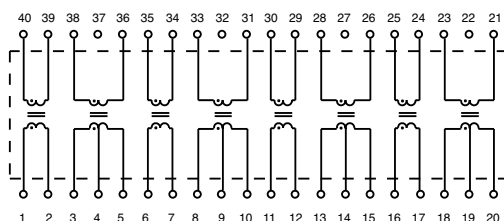
Circuit C



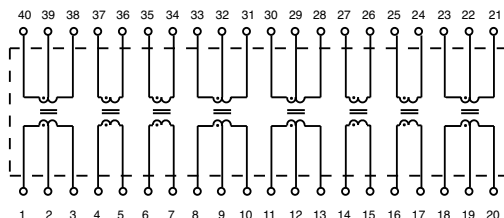
Circuit D



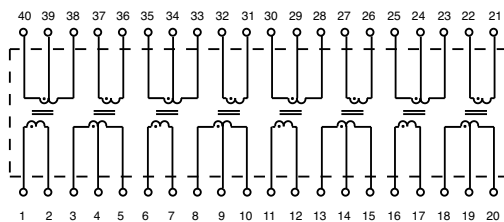
Circuit E



Circuit F



Circuit G



Patented Construction

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

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HALO Electronics:

<u>TG05-1205NXLF</u>	<u>TG05-1205NXLFTR</u>	<u>TG23-1505NXLF</u>	<u>TG23-1505NXLFTR</u>	<u>TG27-1505NXLF</u>	<u>TG27-1505NXLFTR</u>
<u>TG28-1205NXLF</u>	<u>TG28-1205NXLFTR</u>	<u>TG29-1205NXLF</u>	<u>TG29-1205NXLFTR</u>	<u>TG29-1505NXLF</u>	<u>TG29-1505NXLFTR</u>
<u>TG34-1505NXLF</u>	<u>TG34-1505NXLFTR</u>	<u>TG36-1505NXLF</u>	<u>TG36-1505NXLFTR</u>	<u>TG37-1505NXLF</u>	<u>TG37-1505NXLFTR</u>
<u>TG37-5176NXLF</u>	<u>TG37-5176NXLFTR</u>	<u>TG39-1205NXLF</u>	<u>TG39-1205NXLFTR</u>	<u>TG39-1505NXLF</u>	<u>TG39-1505NXLFTR</u>
<u>TG42-1505NXLF</u>	<u>TG42-1505NXLFTR</u>	<u>TG49-LVL1NXLF</u>	<u>TG49-LVL1NXLFTR</u>	<u>TG63-1505NXLF</u>	<u>TG63-1505NXLFTR</u>
<u>TG63-S003NXLF</u>	<u>TG63-S003NXLFTR</u>	<u>TG64-1505NXLF</u>	<u>TG64-1505NXLFTR</u>	<u>TG70-1505NXLF</u>	<u>TG70-1505NXLFTR</u>
<u>TG73-1505NXLF</u>	<u>TG73-1505NXLFTR</u>	<u>TG80-1505NXLF</u>	<u>TG80-1505NXLFTR</u>	<u>TG83-1505NXLF</u>	<u>TG83-1505NXLFTR</u>
<u>TG87-S004NXLF</u>	<u>TG87-S004NXLFTR</u>				