

Quatra™ 10BASE-T Transformer

SMD Quad Port 10BASE-T Transformer



Product Features:

- Four Port 10BASE-T
- IEEE802.3i Compliant
- UL/EN60950 Recognized
- 100% Compliance Testing
- 1500Vrms Hi-Pot
- Patented Open Frame Construction

| Part Number | Turns Ratio $\pm 3\%$ TX | RX | PRI OCL TX/RX (μH typ) | Cw/w TX/RX (pF max) | PRI LL TX/RX (μH max) | PRI DCR TX/RX (Ω max) | Optional CMR Choke | RoHS ¹ |
|---------------|-----------------------------|-----|--|---------------------------|---|-------------------------------------|-----------------------|-------------------|
| TG44-1406NXLF | 1CT:1.41 | 1:1 | 140 | 12 | 0.4 | 0.4 | N/A | Pb-Free |
| TG44-1406NXRL | 1CT:1.41 | 1:1 | 140 | 12 | 0.4 | 0.4 | N/A | RoHS (7a) |
| TG45-1406NXLF | 1CT:1.41CT | 1:1 | 140 | 12 | 0.4 | 0.4 | TX | Pb-Free |
| TG45-1406NXRL | 1CT:1.41CT | 1:1 | 140 | 12 | 0.4 | 0.4 | TX | RoHS (7a) |
| TG46-1406NXLF | 1CT:1.41CT | 1:1 | 140 | 12 | 0.4 | 0.4 | TX/RX | Pb-Free |
| TG46-1406NXRL | 1CT:1.41CT | 1:1 | 140 | 12 | 0.4 | 0.4 | TX/RX | RoHS (7a) |
| TG57-1006NXLF | 1CT:1 | 1:1 | 100 | 12 | 0.3 | 0.3 | N/A | Pb-Free |
| TG57-1006NXRL | 1CT:1 | 1:1 | 100 | 12 | 0.3 | 0.3 | N/A | RoHS (7a) |
| TG58-1006NXLF | 1CT:1CT | 1:1 | 100 | 12 | 0.3 | 0.3 | TX | Pb-Free |
| TG58-1006NXRL | 1CT:1CT | 1:1 | 100 | 12 | 0.3 | 0.3 | TX | RoHS (7a) |
| TG59-1006NXLF | 1CT:1CT | 1:1 | 100 | 12 | 0.3 | 0.3 | TX/RX | Pb-Free |
| TG59-1006NXRL | 1CT:1CT | 1:1 | 100 | 12 | 0.3 | 0.3 | TX/RX | RoHS (7a) |
| TG62-1006NXLF | 2CT:1 | 1:1 | 150 | 10 | 0.6 / 0.3 | 0.35 | N/A | Pb-Free |
| TG62-1006NXRL | 2CT:1 | 1:1 | 150 | 10 | 0.6 / 0.3 | 0.35 | N/A | RoHS (7a) |
| TG66-1006NXLF | 2CT:1CT | 1:1 | 150 | 10 | 0.9 / 0.3 | 0.35 | TX | Pb-Free |
| TG66-1006NXRL | 2CT:1CT | 1:1 | 150 | 10 | 0.9 / 0.3 | 0.35 | TX | RoHS (7a) |
| TG87-2006NXLF | 1CT:2 | 1:1 | 50 / 200 | 10 / 15 | 0.15 / 0.2 | 0.35 / 0.5 | N/A | Pb-Free |
| TG87-2006NXRL | 1CT:2 | 1:1 | 50 / 200 | 10 / 15 | 0.15 / 0.2 | 0.35 / 0.5 | N/A | RoHS (7a) |
| TG88-2006NXLF | 1CT:2CT | 1:1 | 50 / 200 | 9 / 11 | 0.2 / 0.15 | 0.35 / 0.5 | TX | Pb-Free |
| TG88-2006NXRL | 1CT:2CT | 1:1 | 50 / 200 | 9 / 11 | 0.2 / 0.15 | 0.35 / 0.5 | TX | RoHS (7a) |
| TG89-2006NXLF | 1CT:2CT | 1:1 | 50 / 200 | 9 / 11 | 0.2 / 0.3 | 0.35 / 0.5 | TX/RX | Pb-Free |
| TG89-2006NXRL | 1CT:2CT | 1:1 | 50 / 200 | 9 / 11 | 0.2 / 0.3 | 0.35 / 0.5 | TX/RX | RoHS (7a) |

Notes:

1. Pb-Free parts are RoHS 6/6 compliant. RoHS (7a) parts contain lead per exemption 7a which is set to expire in July 2016.
2. Parts with RL suffix are not recommended for new designs.
3. The cable side CTs are not present on those TX circuits without CMR chokes.
4. Please contact the factory or representative for individual datasheets or additional information.

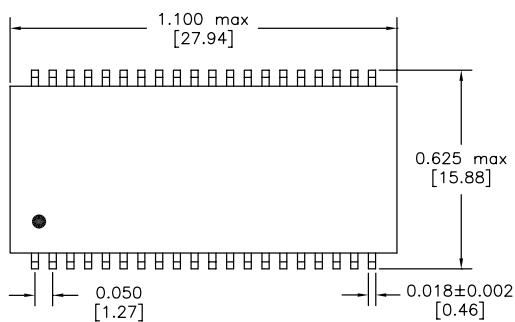
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HALO Quatra 10BASE-T Transformers

Circuit Diagram



Mechanical



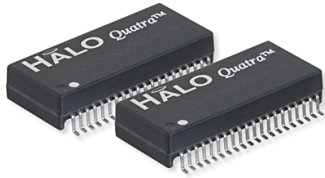
Recommended Solder Pad Layout
 Dimensions: inch [mm]
 Co-Planarity: 0.004 [0.10]

US Patent Numbers:
 5,656,985 6,297,721 B1
 6,297,720 B1 6,320,489 B1
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SMD Quad Port 10BASE-T Transformer



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| Part Number | Turns Ratio ±3% TX | RX | PRI OCL TX/RX (μH typ) | Cw/w TX/RX (pF max) | PRI LL TX/RX (μH max) | PRI DCR TX/RX (Ω max) | Optional CMR Choke | RoHS ¹ |
|---------------|-----------------------|-----|------------------------------|---------------------------|-----------------------------|-----------------------------|-----------------------|-------------------|
| TG41-S010NXLF | 1CT:2.5CT | 1:1 | 35 / 200 | 15 | 0.1 / 0.4 | 0.3 / 0.5 | TX/RX | Pb-Free |
| TG41-S010NXRL | 1CT:2.5CT | 1:1 | 35 / 200 | 15 | 0.1 / 0.4 | 0.3 / 0.5 | TX/RX | RoHS (7a) |
| TG44-S010NXLF | 1CT:1.41 | 1:1 | 140 | 12 | 0.4 | 0.4 | N/A | Pb-Free |
| TG44-S010NXRL | 1CT:1.41 | 1:1 | 140 | 12 | 0.4 | 0.4 | N/A | RoHS (7a) |
| TG45-S010NXLF | 1CT:1.41CT | 1:1 | 140 | 12 | 0.4 | 0.4 | TX | Pb-Free |
| TG45-S010NXRL | 1CT:1.41CT | 1:1 | 140 | 12 | 0.4 | 0.4 | TX | RoHS (7a) |
| TG46-S010NXLF | 1CT:1.41CT | 1:1 | 140 | 12 | 0.4 | 0.4 | TX/RX | Pb-Free |
| TG46-S010NXRL | 1CT:1.41CT | 1:1 | 140 | 12 | 0.4 | 0.4 | TX/RX | RoHS (7a) |
| TG57-S010NXLF | 1CT:1CT | 1:1 | 100 | 12 | 0.3 | 0.3 | N/A | Pb-Free |
| TG57-S010NXRL | 1CT:1CT | 1:1 | 100 | 12 | 0.3 | 0.3 | N/A | RoHS (7a) |
| TG58-S010NXLF | 1CT:1CT | 1:1 | 100 | 12 | 0.3 | 0.3 | TX | Pb-Free |
| TG58-S010NXRL | 1CT:1CT | 1:1 | 100 | 12 | 0.3 | 0.3 | TX | RoHS (7a) |
| TG59-S010NXLF | 1CT:1CT | 1:1 | 100 | 12 | 0.3 | 0.3 | TX/RX | Pb-Free |
| TG59-S010NXRL | 1CT:1CT | 1:1 | 100 | 12 | 0.3 | 0.3 | TX/RX | RoHS (7a) |
| TG62-S010NXLF | 2CT:1 | 1:1 | 150 | 10 | 0.6 / 0.3 | 0.35 | N/A | Pb-Free |
| TG62-S010NXRL | 2CT:1 | 1:1 | 150 | 10 | 0.6 / 0.3 | 0.35 | N/A | RoHS (7a) |
| TG66-S010NXLF | 2CT:1CT | 1:1 | 150 | 10 | 0.9 / 0.3 | 0.35 | TX/RX | Pb-Free |
| TG66-S010NXRL | 2CT:1CT | 1:1 | 150 | 10 | 0.9 / 0.3 | 0.35 | TX/RX | RoHS (7a) |
| TG87-S010NXLF | 1CT:2 | 1:1 | 50 / 200 | 9 / 11 | 0.75 / 0.15 | 0.35 / 0.5 | N/A | Pb-Free |
| TG87-S010NXRL | 1CT:2 | 1:1 | 50 / 200 | 9 / 11 | 0.75 / 0.15 | 0.35 / 0.5 | N/A | RoHS (7a) |
| TG88-S010NXLF | 1CT:2CT | 1:1 | 50 / 200 | 9 / 11 | 0.2 / 0.15 | 0.35 / 0.5 | TX | Pb-Free |
| TG88-S010NXRL | 1CT:2CT | 1:1 | 50 / 200 | 9 / 11 | 0.2 / 0.15 | 0.35 / 0.5 | TX | RoHS (7a) |
| TG89-S010NXLF | 1CT:2CT | 1:1 | 50 / 200 | 9 / 14 | 0.2 / 0.3 | 0.2 / 0.3 | TX/RX | Pb-Free |
| TG89-S010NXRL | 1CT:2CT | 1:1 | 50 / 200 | 9 / 14 | 0.2 / 0.3 | 0.2 / 0.3 | TX/RX | RoHS (7a) |

Notes:

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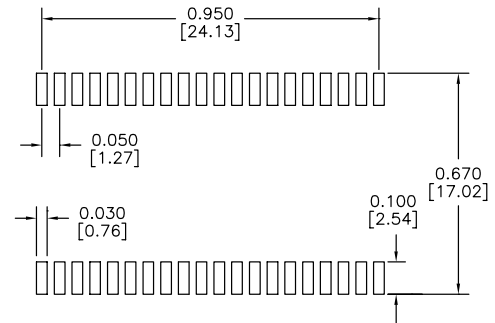
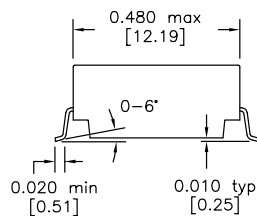
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Circuit Diagram



Mechanical



Recommended Solder Pad Layout
 Dimensions: inch [mm]
 Co-Planarity: 0.004 [0.10]

US Patent Numbers:
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|---------------|-----------------------|-----|------------------------------|---------------------------|-----------------------------|-----------------------------|-----------------------|-------------------|
| TG44-S020NXLF | 1CT:1.41 | 1:1 | 140 | 12 | 0.4 | 0.4 | N/A | Pb-Free |
| TG44-S020NXRL | 1CT:1.41 | 1:1 | 140 | 12 | 0.4 | 0.4 | N/A | RoHS (7a) |
| TG45-S020NXLF | 1CT:1.41CT | 1:1 | 140 | 12 | 0.4 | 0.4 | TX | Pb-Free |
| TG45-S020NXRL | 1CT:1.41CT | 1:1 | 140 | 12 | 0.4 | 0.4 | TX | RoHS (7a) |
| TG46-S020NXLF | 1CT:1.41CT | 1:1 | 140 | 12 | 0.4 | 0.4 | TX/RX | Pb-Free |
| TG46-S020NXRL | 1CT:1.41CT | 1:1 | 140 | 12 | 0.4 | 0.4 | TX/RX | RoHS (7a) |
| TG57-S020NXLF | 1CT:1 | 1:1 | 100 | 12 | 0.3 | 0.3 | N/A | Pb-Free |
| TG57-S020NXRL | 1CT:1 | 1:1 | 100 | 12 | 0.3 | 0.3 | N/A | RoHS (7a) |
| TG58-S020NXLF | 1CT:1CT | 1:1 | 100 | 12 | 0.3 | 0.3 | TX | Pb-Free |
| TG58-S020NXRL | 1CT:1CT | 1:1 | 100 | 12 | 0.3 | 0.3 | TX | RoHS (7a) |
| TG59-S020NXLF | 1CT:1CT | 1:1 | 100 | 12 | 0.3 | 0.3 | TX/RX | Pb-Free |
| TG59-S020NXRL | 1CT:1CT | 1:1 | 100 | 12 | 0.3 | 0.3 | TX/RX | RoHS (7a) |
| TG62-S020NXLF | 2CT:1 | 1:1 | 150 | 10 | 0.6 / 0.3 | 0.35 | N/A | Pb-Free |
| TG62-S020NXRL | 2CT:1 | 1:1 | 150 | 10 | 0.6 / 0.3 | 0.35 | N/A | RoHS (7a) |
| TG66-S020NXLF | 2CT:1CT | 1:1 | 150 | 10 | 0.9 / 0.3 | 0.35 | TX/RX | Pb-Free |
| TG66-S020NXRL | 2CT:1CT | 1:1 | 150 | 10 | 0.9 / 0.3 | 0.35 | TX/RX | RoHS (7a) |
| TG87-S020NXLF | 1CT:2 | 1:1 | 50 / 200 | 9 / 11 | 0.075 / 0.15 | 0.35 / 0.5 | N/A | Pb-Free |
| TG87-S020NXRL | 1CT:2 | 1:1 | 50 / 200 | 9 / 11 | 0.075 / 0.15 | 0.35 / 0.5 | N/A | RoHS (7a) |
| TG88-S020NXLF | 1CT:2CT | 1:1 | 50 / 200 | 9 / 11 | 0.2 / 0.15 | 0.35 / 0.5 | TX | Pb-Free |
| TG88-S020NXRL | 1CT:2CT | 1:1 | 50 / 200 | 9 / 11 | 0.2 / 0.15 | 0.35 / 0.5 | TX | RoHS (7a) |
| TG89-S020NXLF | 1CT:2CT | 1:1 | 50 / 200 | 9 / 11 | 0.2 / 0.3 | 0.35 / 0.5 | TX/RX | Pb-Free |
| TG89-S020NXRL | 1CT:2CT | 1:1 | 50 / 200 | 9 / 11 | 0.2 / 0.3 | 0.35 / 0.5 | TX/RX | RoHS (7a) |

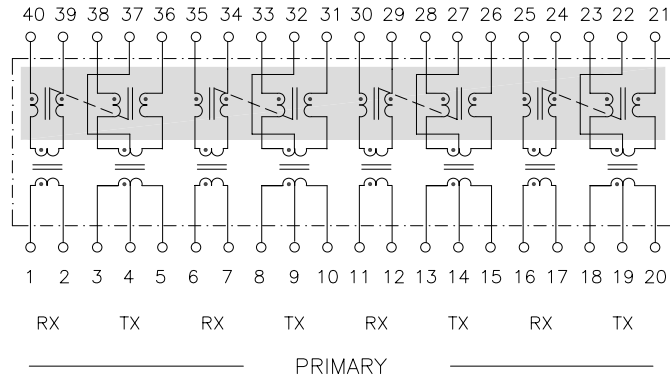
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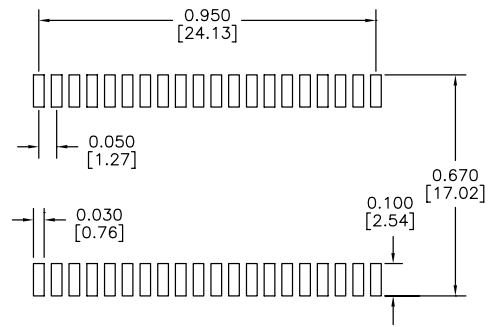
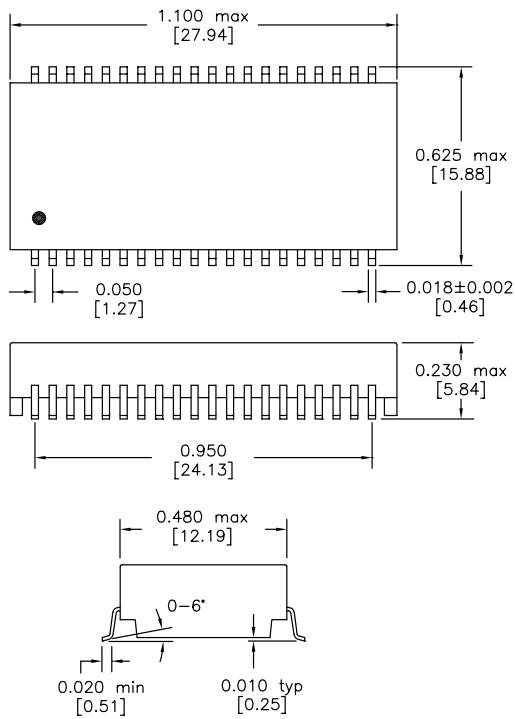
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Recommended Solder Pad Layout
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 Santa Clara, CA 95054
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www.haloelectronics.com

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.

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: ocean@oceanchips.ru

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А