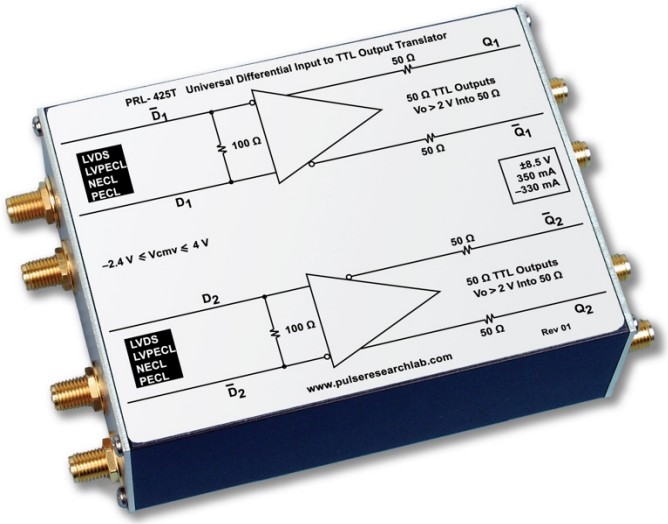
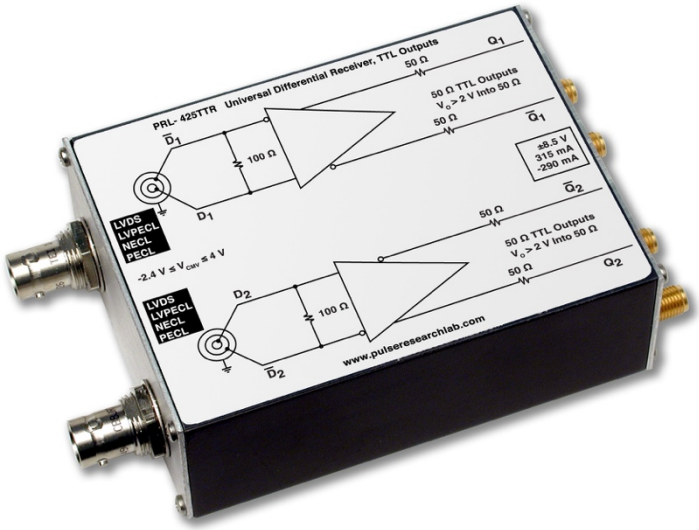
PRL-425T/PRL-425TTR DUAL CHANNEL UNIVERSAL DIFFERENTIAL RECEIVERS, TTL OUTPUTS



PRL-425T, Universal Differential Receiver (SMA), TTL Outputs



PRL-425TTR, Universal Differential Receiver (Triax), TTL Outputs

APPLICATIONS

- Differential LVDS, RS422, LVPECL, NECL, or PECL to TTL Logic Level Translation
- Conversion of Differential Signals to Ground-Referenced Signals
- Mini-Modular Instrument for interfacing with High Speed Data Communications Equipment

FEATURES

- 300 MHz maximum Clock Rate
- Floating 100 Ω Universal Differential Inputs Accept LVDS, RS422, LVPECL, NECL, or PECL Inputs
- Complementary 50 Ω TTL Outputs
- Ready-to-Use 1.3 x 2.9 x 3.9-in. Modules include a ±8.5V/1.4A AC/DC Adapter

DESCRIPTION

The PRL-425T and PRL-425TTR are dual channel, universal input differential receivers with TTL outputs. The floating 100 Ω inputs are designed for interfacing with differential signals within the common mode range of -2.4V to +4V. Therefore, they are compatible with LVDS, RS422, LVPECL, LVTTL/CMOS, NECL, or PECL differential input signals. The PRL-425T has dual SMA inputs per channel; the PRL-425TTR has a Triax input per channel.

Both models have complementary TTL outputs for driving 50 Ω or open circuit loads. They are also long line drivers, designed specifically for use with high speed data communications applications. Functional block diagrams of these devices are shown in Fig. 1 and Fig. 2.

Each unit is supplied with a ±8.5 V/1.4 A AC/DC Adapter and housed in a 1.3 x 2.9 x 3.9-in. extruded aluminum enclosure. Available accessories include voltage distribution modules and brackets for mounting multiple units.

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*SPECIFICATIONS (0^0 C ≤ T_A ≤ 35^0C)

SYMBOL	PARAMETER	Min	Typ	Max	UNIT
R_{inD}	Differential Input Resistance	95	100	105	Ω
R_{inC}	Common Mode Input Resistance		5K		Ω
I_{DC1}	DC Input Current, +8.5 V		175	185	mA
I_{DC2}	DC Input Current, -8.5 V		-365	-385	mA
V_{DC}	DC Input Voltage	±7.5	±8.5	±12	V
V_{AC}	AC/DC Adapter Input Voltage	103	115	127	V
V_{OHNL}	Output Hi Level, No Load	4.0	4.6	5.0	V
V_{OHFL}	Output Hi Level, Full load	2.0	2.3	2.5	V
V_{OLNL}	Output Lo Level, No Load	-0.1	0.0	0.4	V
V_{OLFL}	Output Lo Level, Full Load	-0.05	0.0	0.2	V
t_{PLH}	Propagation Delay to output ↑		2200		ps
t_{PHL}	Propagation Delay to output ↓		2200		ps
t_r/t_f	Rise/Fall Times[1]		1000	1300	ps
fmax I	Max Clock Frequency, SMA[2]	250	300		MHz
fmax II	Max Clock Frequency, Triax[3]	250	300		MHz
t_{SKEW1}	Skew between outputs		500	1200	ps
t_{SKEW2}	Skew from unit to unit		750	1500	ps
V_{CMV}	Input Common Mode Voltage	-2.4		+4.0	V
	Size		1.3x2.9x3.9		in.
	Weight		7		Oz
	Shipping Weight w/AC adapter		4		lb

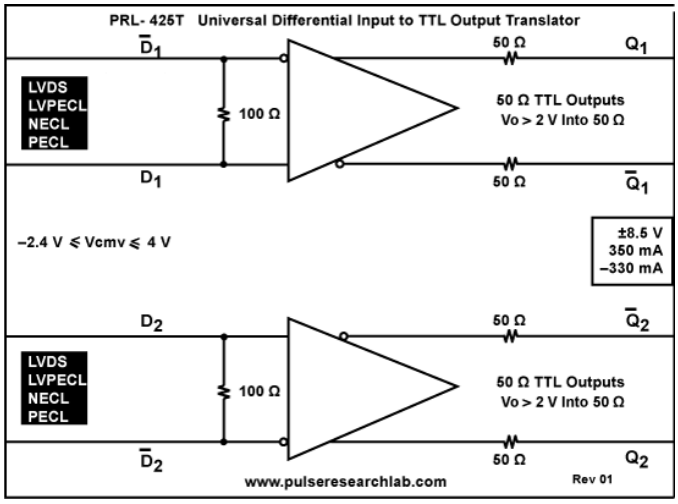


Fig. 1 PRL-425T Block Diagram

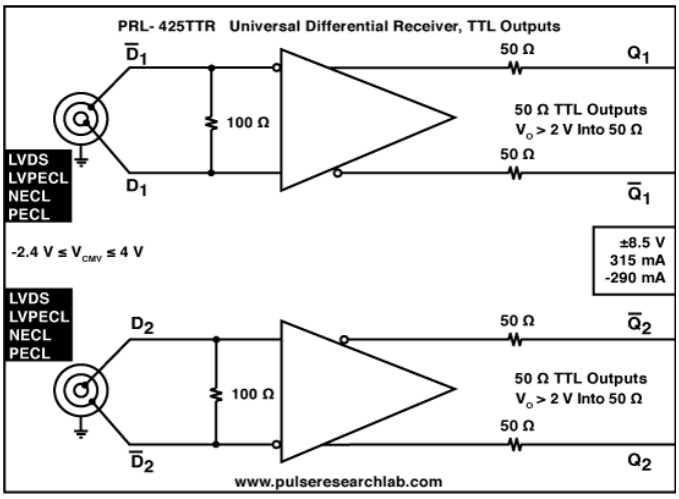


Fig. 1 PRL-425TTR Block Diagram

Notes: (1). TTL outputs rise and fall times (10%-90%) are measured with ground referenced 50 Ω terminations, and it is not necessary to terminate an unused output.
(2). f_{MAX} for PRL-425T is specified when V_{OH} drops below 2.0 V into 50 Ω
(3). Units with the Trompeter CBBJR79 Triax input connectors are tested using the PRL-433N, complementary NECL input to Differential NECL output translator, and the Trompeter PCGOW10PCG-36 shielded twisted pair cables.

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