




10BASE-T QUAD SMT TRANSFORMER MODULES

For AMD's QuIET™, QuEST™, eIMR™ and eIMR+™ Device Chipsets

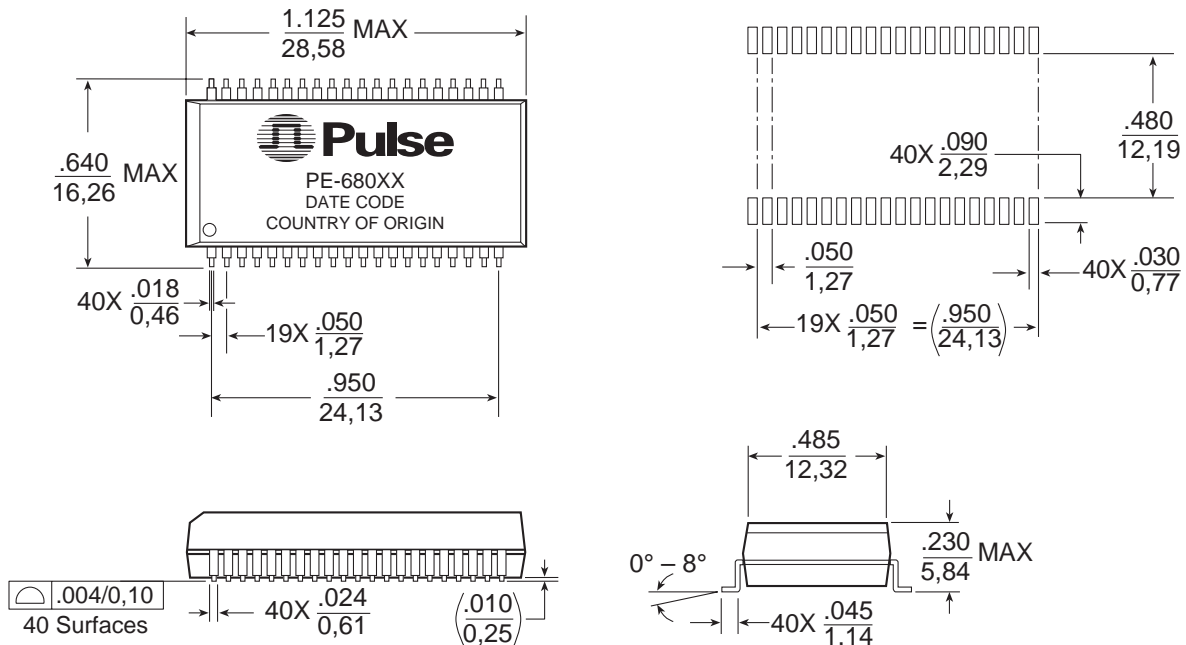


-  Family of parts – common footprint and pinout with a choice of filtering for customized EMI performance
-  IC-grade transfer molded package with-stands 235°C peak temperature profile
-  Space-efficient – 12 ports across 3.6" (91,44 mm) for optimal PCB layout

Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

Part Number	Insertion Loss to 10 MHz (dB MAX)	Attenuation XMIT (dB MIN)			Return Loss 5 to 10 MHz (dB MIN)		Crosstalk (dB MIN)	Common Mode Rejection XMIT (dB MIN)				Hipot (Vrms MIN)
		30 MHz	70 MHz	100 MHz	100 Ω	98 ±13 Ω		5-10 MHz	5-10 MHz	50 MHz	100 MHz	
PE-68049	-1.0	NA	NA	NA	-20	-15	-50	-50	-35	-25	-20	1500
PE-68050	-1.0	NA	NA	NA	-20	-15	-50	-50	-35	-25	-20	1500
PE-68051	-1.0	-10	-29	-35	-20	-15	-45	-50	-35	-25	-15	1500

Mechanical



Dimensions: $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are $\pm \frac{.010}{0,25}$

Weight 4.0 grams
Tape & Reel250/reel
Tube15/tube

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Application Notes

Pulse designed and developed this series of Quad Modules for "filter-on-chip" 10Base-T multiport applications. Please note: **Additional wave shaping is required for IEEE compliance.** This filtering is typically provided by the transceiver.

Each module offers a different level of electrical performance:

PE-68050 contains receive and transmit transformers to maintain signal integrity, suppress common mode noise, and supply equipment isolation per the IEEE 802.3i-1993 standard.

PE-68049 contains the same receive and transmit transformers as well as high impedance, common mode chokes on each transmit channel. Chokes are added for EMI suppression and may be necessary for FCC and CISPR 22 Class B certification.

PE-68051 adds low pass filtering on each transmit channel to the PE-68049 configuration. Alone, the minimal filtering does not meet IEEE attenuation requirements. However, in conjunction with filtering from other sources, it may enhance circuit performance.

In typical multiport applications, many channels are in close proximity. User compliance with FCC/CISPR 22 Class B requirements can be achieved by applying rigorous design guidelines to suppress noise

mechanisms. Attention to high frequency signal paths, good PCB grounding techniques, and component placement are critical. Refer to the suggested layout on page 4.

All three modules are encapsulated in a 40-pin surface mountable package. Mechanical features include:

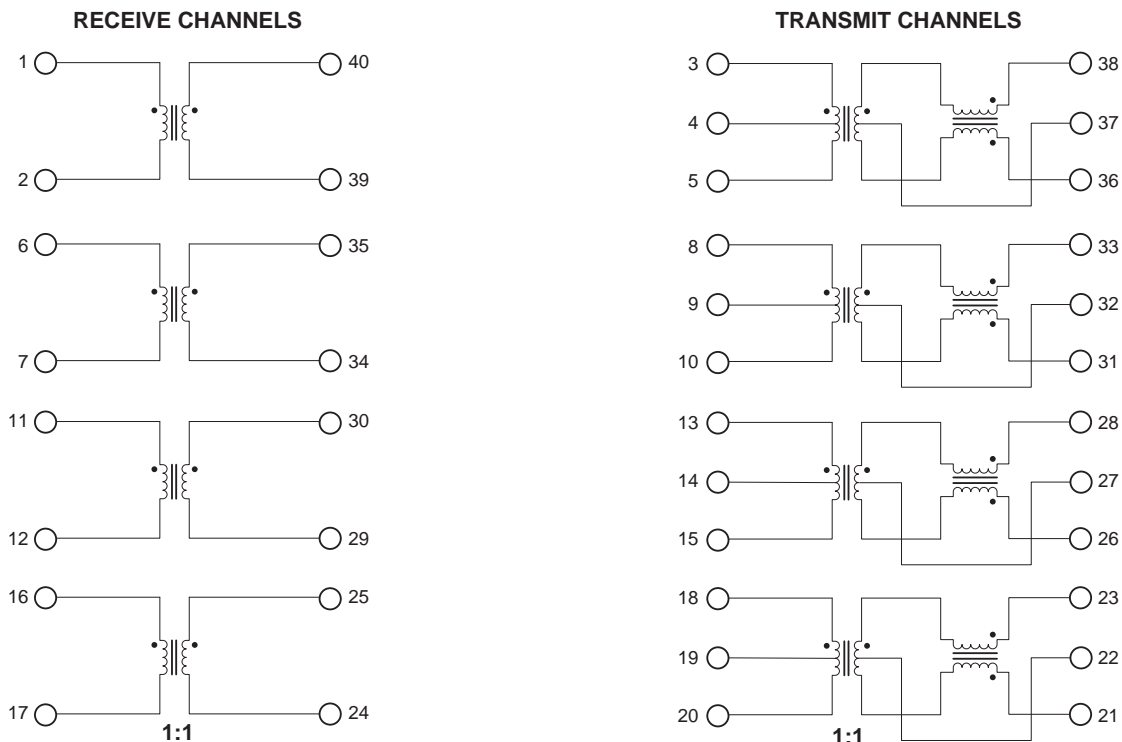
1. Light weight - approximately 4 grams for rapid pick and place.
2. Compliant leads - provide excellent solder joint reliability.
3. Low profile - under 6 mm to accommodate industry standard pick and place equipment capabilities.
4. Compact form factor - footprint allows the user to layout four ports within the space of 2 double stacked RJ45 connectors or a total of twelve (12) ports to a high density 50-pin connector.

Modules are packaged in tubes unless Tape & Reel is specified. Please add the suffix "T" such as PE-68049T for **Tape & Reel** packaging, in increments of 250 pieces.

Pulse also offers a full line of 10Base-T filter modules, designed to IEEE specifications. For more information, please contact one of the locations listed on the back page of this publication.

Schematics

PE-68049



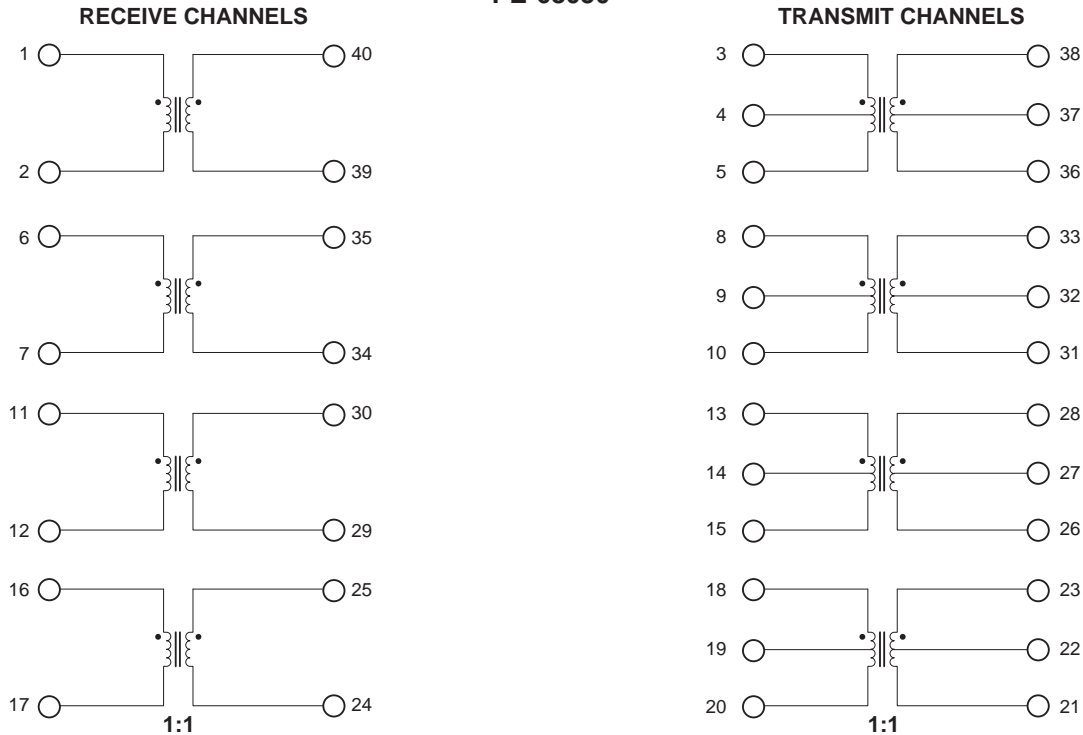
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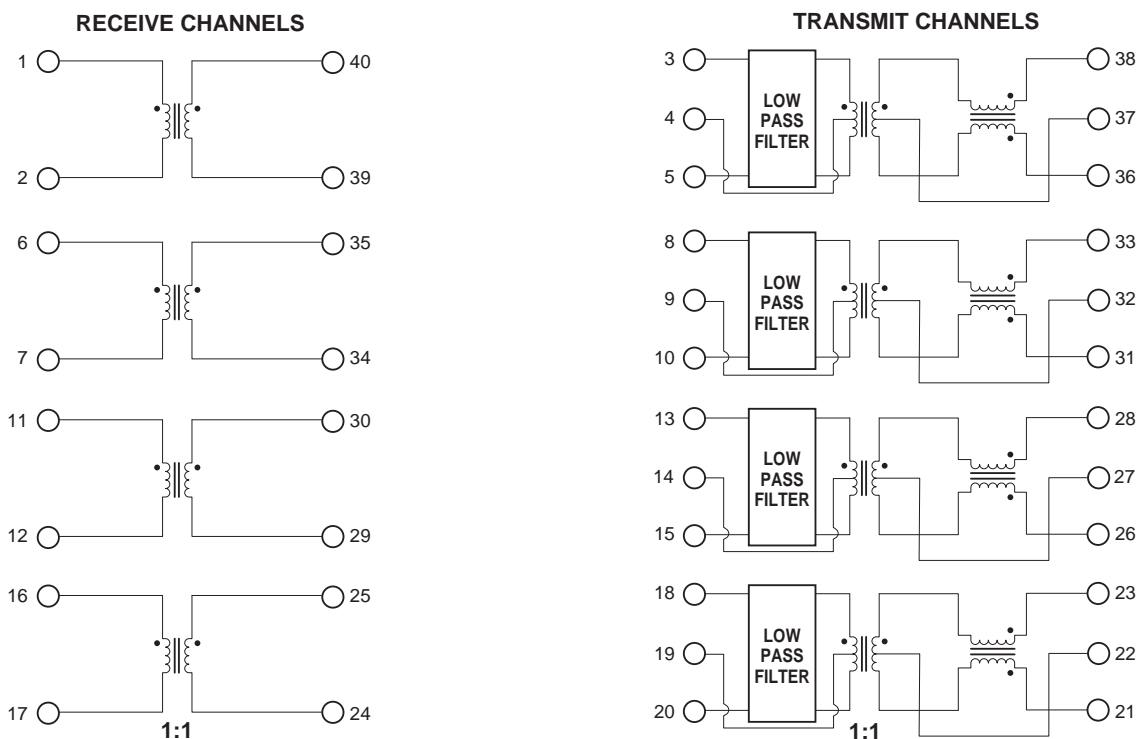


Schematics

PE-68050



PE-68051

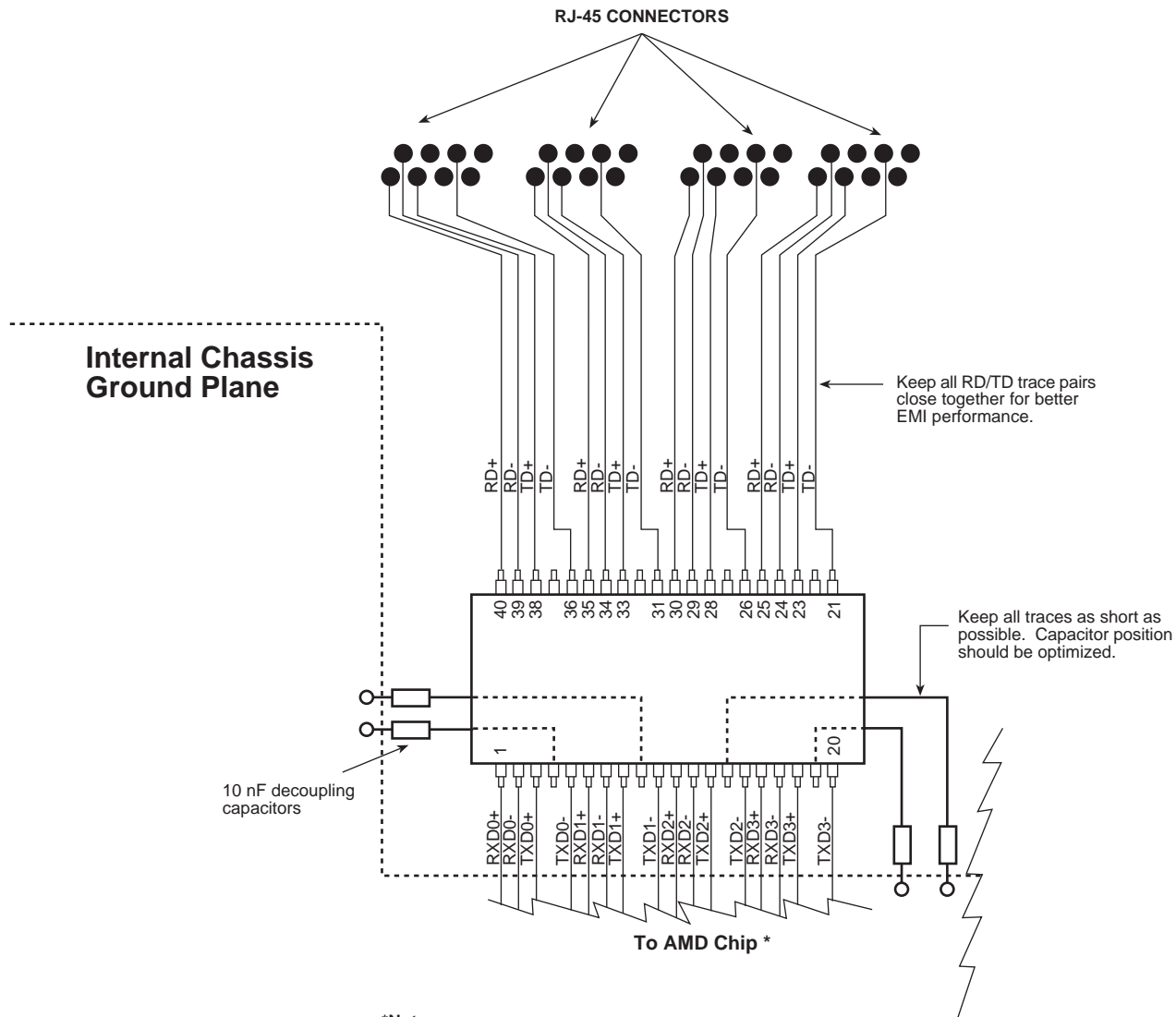


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Recommended Layout



***Note:**
 QuIET™ (Am 79C988), QuEST™ (Am79C989), eIMR™ (Am 79C984A), or
 eIMR+™ (Am 79C985). See AMD application notes for more detailed information.

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