

Filtered Terminal Blocks



UL Recognized Filter Terminal Blocks

Application

Recognized by UL, Filtered Terminal Blocks are specifically designed to save time and money for EMI filtering applications. Combining a filtering component with an industry standard terminal block has created an effective barrier to EMI noise.

Filtered Terminal Blocks allow the engineer to eliminate EMI noise using an existing mechanical design concept. Our commitment to excellence and service allows for customization of the filtered terminal blocks to meet customer-specific EMC qualifications. Backed by decades of ceramic component production experience, CTS's Filtered Terminal Blocks will meet or exceed your application requirements.

Benefits

- Saves Labor and Space
- Consistent Panel Layout
- Solves EMI Problems
- Meets Specific Requirements

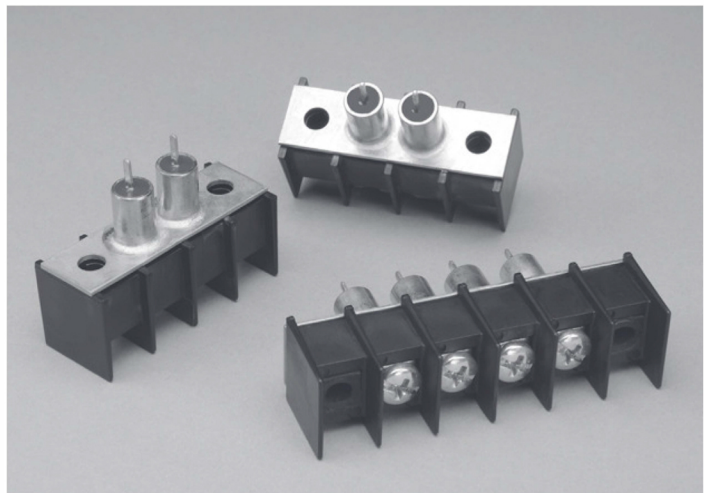
Features

- Filter Integral to Block
- Industry Standard Block
- Wide Range of Performance
- Customization

The CTS Terminal Blocks listed in this Catalog are Recognized to UL Standard 1283 for the EMI Filter and UL Standard 1059 for the Terminal Block.

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Filtered Terminal Blocks

Practical Applications

- Telecommunications
- Computer and Peripheral Equipment
- Industrial Process Control Equipment
- Power Supplies
- Office and Lab Equipment

Filtered Terminal Blocks Specifications

1.0 Scope

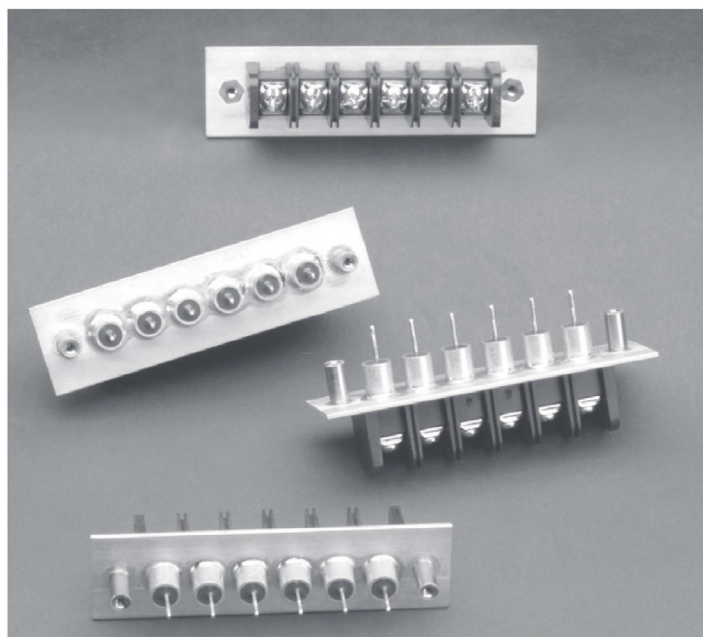
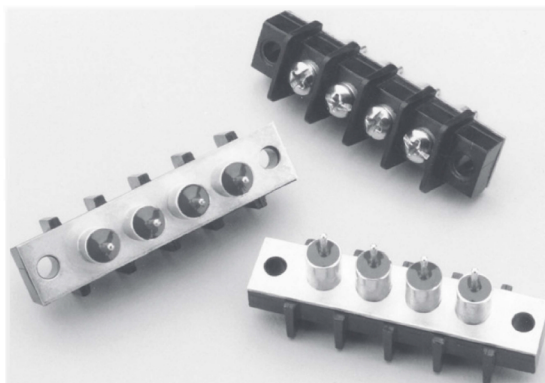
This specification describes the basic performance requirements of CTS Filtered Terminal Blocks.

2.0 Capacitance

Measurement Conditions: Capacitance measured at $25^{\circ}\pm 2^{\circ}\text{C}$, 50% max R.H. and Frequency of 1 KHz @ $1\pm 0.2\text{VRMS}$.

3.0 Insertion Loss

- 3.1 Measurement Conditions: Insertion Loss values listed are measured in a 50W system at $25^{\circ}\text{C}\pm 2^{\circ}\text{C}$ under no-load conditions.
- 3.2 Insertion Loss: The Insertion Loss values listed are typical values for both 500 and 600 styles under indicated conditions.
- 3.3 Listed Insertion Loss data is a measurement of filter performance in a matched 50W system. It is highly recommended that filter performance be verified under actual circuit operation conditions.



4.0 Operating Conditions

Filters are designed to operate continuously at the voltage and current that is stated for each CTS corporation part number. If the operating ambient temperature is significantly higher than 25°C , the terminal blocks should be installed in equipment and tested under actual conditions to ensure that maximum temperatures are not exceeded.

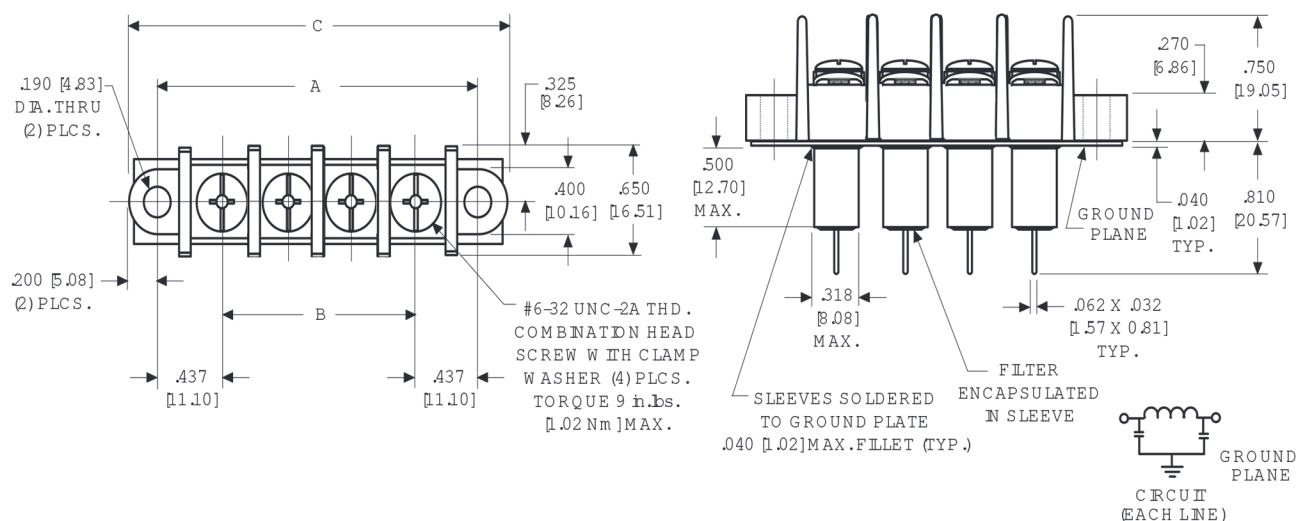
5.0 Dielectric Withstanding Voltage

Filters shall withstand the specified voltage applied between the screw terminal and ground plane for one minute. Surge current shall be limited to a maximum of 50mA.

6.0 Insulation Resistance

Measured at $25^{\circ}\text{C}\pm 2^{\circ}\text{C}$ with 100VDC and charging current limited to 50mA max. The IR, after two minutes maximum application of the test voltage, shall be a minimum of 10 G Ω .

UL Recognized "Pi" Filter Terminal Blocks



CTS Part Number	Number of Terminals	Screw Size	A		B		C	
7602-501LF	2	#6-32	1.313	[33.35]	.437	[11.10]	1.710	[43.43]
7603-501LF	3	#6-32	1.750	[44.45]	.875	[22.23]	2.150	[54.61]
7604-501LF	4	#6-32	2.188	[55.58]	1.311	[33.30]	2.590	[65.79]
7605-501LF	5	#6-32	2.625	[66.68]	1.750	[44.45]	3.020	[76.71]
7606-501LF	6	#6-32	3.063	[77.80]	2.185	[55.50]	3.460	[87.88]
7607-501LF	7	#6-32	3.500	[88.90]	2.625	[66.68]	3.900	[99.06]
7608-501LF	8	#6-32	3.938	[100.03]	3.063	[77.80]	4.340	[110.24]
7609-501LF	9	#6-32	4.375	[111.13]	3.500	[88.90]	4.770	[121.16]
7610-501LF	10	#6-32	4.813	[122.25]	3.938	[100.03]	5.210	[132.33]

Mechanical Specifications

- Center Spacing: .437 [11.10]
- Wire Size: up to 12AWG, Ø.081[2.06]
- Molded Material: High Temp Thermoplastic (PBT), UL rated 94 V-0
- Block Mounting: Recommended mounting screw (#8 Pan Head) Torque 5in.lbs. [0.56 Nm] Max.
- Terminal: Brass, Tin-plated

UL Recognition



- EMI Filters recognized to UL Standard 1283
- Terminal Block recognized to UL Standard 1059
- Reference UL File Number E201344

Electrical Specifications

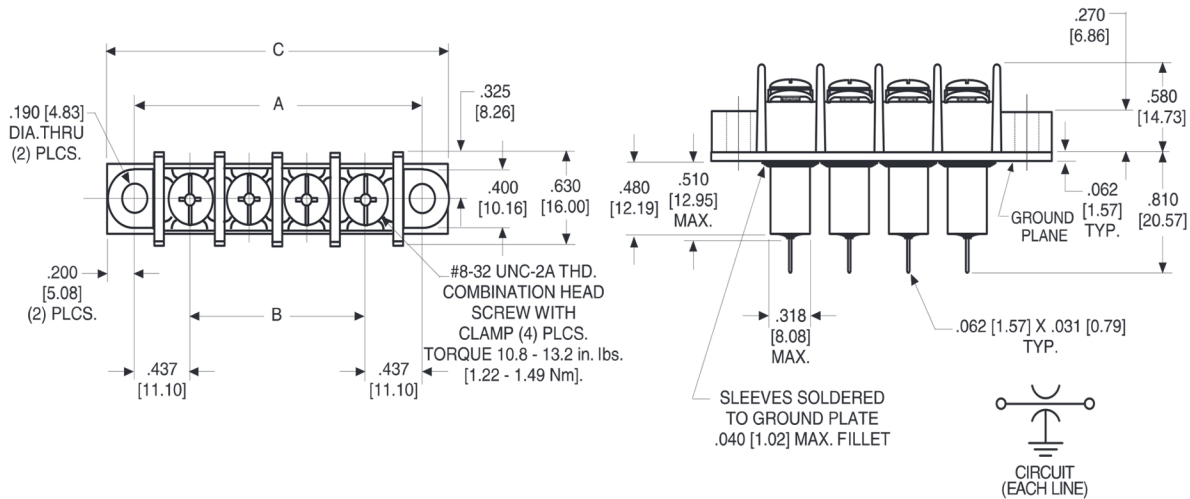
- Operating Temperature: -40°C to 105°C
- Working Voltages: ≤ 250 VAC *
- Capacitance: ≥ 2000pF
- Dielectric Withstanding Voltage: 1500VAC *
- Insulation Resistance: ≥ 10 GΩ
- Current Rating: 20A
- DC Resistance: ≤ 10 mΩ
- Typical Insertion Loss[dB], in 50 Ω Circuit

10 MHz	100 MHz	1 GHz	10 GHz
5dB	50dB	60dB	65dB

(For additional insertion loss values, please contact the factory directly.)

* AC Frequency 50/60Hz

UL Recognized 30 AMP "C" Filtered Terminal



Please Note - Two screw sizes are available: The #6-32 (601) screw with combination head screw & clamp washer and the #8-32 (602) screw without clamp washer.

CTS Part Number	Number of Terminals	Screw Size	A		B		C	
		602						
7602-602LF	2	#8-32	1.313	[33.35]	.437	[11.10]	1.710	[43.43]
7603-602LF	3	#8-32	1.750	[44.45]	.874	[22.20]	2.150	[54.61]
7604-602LF	4	#8-32	2.188	[55.58]	1.311	[33.30]	2.590	[65.79]
7605-602LF	5	#8-32	2.625	[66.68]	1.748	[44.40]	3.020	[76.71]
7606-602LF	6	#8-32	3.063	[77.80]	2.185	[55.50]	3.460	[87.88]
7607-602LF	7	#8-32	3.500	[88.90]	2.622	[66.60]	3.900	[99.06]
7608-602LF	8	#8-32	3.938	[100.03]	3.059	[77.70]	4.340	[110.24]
7609-602LF	9	#8-32	4.375	[111.13]	3.496	[88.80]	4.770	[121.16]
7610-602LF	10	#8-32	4.813	[122.25]	3.933	[99.90]	5.210	[132.33]

Mechanical Specifications

- Center Spacing: .437 [11.10]
- Wire Size: up to 10AWG, Ø.102 [2.59]
- Molded Material: High Temp Thermoplastic (PBT), UL rated 94 V-0.
- Block Mounting: Recommended mounting screw (#8 Pan Head) Torque 5in.lbs. [0.56 Nm] Max
- Terminal: Brass, Tin-plated

UL Recognition



- EMI Filters recognized to UL Standard 1283
- Terminal Block recognized to UL Standard 1059
- Reference UL File Number E201344

Electrical Specifications

- Operating Temperature: -40°C to 105°C
- Working Voltages: ≤ 150 VDC
- Capacitance: ≥15,000pF Minimum
- Dielectric Withstand Voltage: 2121VDC
- Insulation Resistance: ≥ 10,000 MΩ
- Current Rating: 30A, (30A rating requires 10 AWG wire and lugs)
- DC Resistance: ≤ 10 mΩ
- Typical Insertion Loss, in 50 Ω Circuit (dB):

10 MHz	100 MHz	1 GHz	10 GHz
28dB	45dB	70dB	70dB

(For additional Insertion loss values, contact the factory.)

Product Installation Recommendations

The components in this catalog are manufactured with ceramic dielectrics. To minimize possible damage to the components during installation, contact us at: <https://www.ctscorp.com/contact/request-technical-info/> for more help and information.

To learn more visit: www.ctscorp.com

