Size:
2.28 x 1.45 x 0.50 inches
(57.9 x 36.8 x 12.7 mm)

Applications:
- Automation
- Telecom/Datacom
- Industry Control Systems
- ICP
- Measurement

FEATURES

- Soft Start
- Single Outputs
- Input Under Voltage Protection
- High Efficiency up to 93%
- Remote ON/OFF Control
- 2:1 Wide Input Voltage Ranges
- No Minimum Load Required
- 2250VDC I/O Basic Insulation
- Voltage Adjustability
- Low Stand-by Power Consumption
- Industry Standard Quarter-brick Package
- Up to 108 Watts Maximum Output Power
- Short Circuit, Over Voltage, Over Load, & Over Temp. Protection
- UL60950-1, EN60950-1, and IEC60950-1 Safety Approvals
- CE Marked
- RoHS & REACH Compliant
- Optional Heatsinks Available (Suffix “HS”)
- Threaded (Standard) or Thru-Hole (Optional) Inserts Available

DESCRIPTION

The DCQA100 series of DC/DC power converters provides up to 108 Watts of output power in a 2.28” x 1.45” x 0.5” industry standard quarter-brick package. This series has single output models with 2:1 wide input voltage ranges of 8.5-22VDC, 16.5-36VDC, and 33-75VDC. Some features include high efficiency up to 93%, 2250VDC I/O basic insulation, and remote ON/OFF control. These converters are also protected against input under voltage, short circuit, over voltage, over load, and over temperature conditions. All models are RoHS compliant and have UL60950-1, EN60950-1, and IEC60950-1 safety approvals. Several different options are available for this series including negative logic remote ON/OFF, heatsinks, and thru-hole inserts.

MODEL SELECTION TABLE

Model Number	Input Voltage Range	Output Voltage	Output Current		Output Ripple & Noise	No Load Input Current	Output Power	Efficiency	Maximum Capacitive Load
			Min Load	Max Load					
DCQA100-12S33	12 VDC (8.5 - 22 VDC)	3.3 VDC	0mA	25A	75mVp-p	50mA	82.5W	89%	75,000µF
DCQA100-12S05		5 VDC	0mA	18A	75mVp-p	50mA	90W	90%	36,000µF
DCQA100-12S12		12 VDC	0mA	7.5A	100mVp-p	50mA	90W	91%	6250µF
DCQA100-12S15		15 VDC	0mA	6A	100mVp-p	50mA	90W	91%	4000µF
DCQA100-12S24		24 VDC	0mA	3.7A	200mVp-p	50mA	88.8W	90%	1540µF
DCQA100-12S30		30 VDC	0mA	3A	200mVp-p	50mA	90W	90%	1000µF
DCQA100-12S48		48 VDC	0mA	1.8A	300mVp-p	50mA	86.4W	89%	380µF
DCQA100-24S33	24 VDC (16.5 - 36 VDC)	3.3 VDC	0mA	25A	75mVp-p	25mA	82.5W	89%	75,000µF
DCQA100-24S05		5 VDC	0mA	18A	75mVp-p	25mA	90W	90%	36,000µF
DCQA100-24S12		12 VDC	0mA	7.5A	100mVp-p	25mA	90W	91%	6250µF
DCQA100-24S15		15 VDC	0mA	6A	100mVp-p	25mA	90W	91%	4000µF
DCQA100-24S24		24 VDC	0mA	3.7A	200mVp-p	25mA	88.8W	92%	1540µF
DCQA100-24S30		30 VDC	0mA	3A	200mVp-p	25mA	90W	91%	1000µF
DCQA100-24S48		48 VDC	0mA	1.8A	300mVp-p	25mA	86.4W	89%	380µF
DCQA100-48S33	48 VDC (33 - 75 VDC)	3.3 VDC	0mA	25A	75mVp-p	15mA	82.5W	89%	75,000µF
DCQA100-48S05		5 VDC	0mA	21A	75mVp-p	15mA	105W	91%	42,000µF
DCQA100-48S12		12 VDC	0mA	9A	100mVp-p	15mA	108W	90%	7500µF
DCQA100-48S15		15 VDC	0mA	7A	100mVp-p	15mA	105W	91%	4600µF
DCQA100-48S24		24 VDC	0mA	4.5A	200mVp-p	15mA	108W	93%	1870µF
DCQA100-48S30		30 VDC	0mA	3.5A	200mVp-p	15mA	105W	92%	1160µF
DCQA100-48S48		48 VDC	0mA	2.2A	300mVp-p	15mA	105.6W	91%	460µF

NOTES

1. Input Source Impedance: The power modules will operate to specifications without external components, assuming that the source voltage has very low impedance and reasonable input voltage regulation. Highly inductive source impedances can affect the stability of the power module. Since real-world voltage sources have finite impedance, performance is improved by adding an external filter capacitor. We recommend using Nippon Chemi-con KY series, 100µF/100V.
2. Maximum output deviation is +10% inclusive of remote sense and trim. If remote sense is not being used, sense pins should connect to the output pins with the same polarity.
3. The DCQA100 series can only meet EMI Class A or Class B with external components added. Please contact factory for more information.
4. An external input filter capacitor is required if the module has to meet EN61000-4-4, EN61000-4-5. We recommend connecting two pieces of aluminum electrolytic capacitors (Nippon chemi-con KY series, 220µF/100V).
5. Both positive logic and negative logic remote ON/OFF control is available. Positive logic remote ON/OFF comes standard; for negative logic remote ON/OFF add the suffix “R” to the model number (Ex: DCQA100-48S24R).
6. Optional heatsinks available. See page 5 for ordering details.
7. M3 x 0.5 threaded-thru inserts come standard. For Ø.126 thru-hole inserts add the suffix “TH” to the model number (Ex: DCQA100-48S24TH). Models with thru-hole inserts cannot be equipped with a heatsink.
8. BASE-PLATE GROUNDING: EMI can be reduced when two screw bolts connected to shield plane.
9. This product is Listed to applicable standards and requirements by UL.

CAUTION: This power module is not internally fused. An input line fuse must always be used.
Due to advances in technology, specifications are subject to change without notice.

SPECIFICATIONS: DCQA100 SERIES

All specifications are based on 25°C, Nominal Input Voltage, and Full Load unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit
INPUT SPECIFICATIONS						
Input Voltage Range	12VDC nominal input models		8.5	12	22	VDC
	24VDC nominal input models		16.5	24	36	
	48VDC nominal input models		33	48	75	
Start-Up Voltage	12VDC nominal input models				9	VDC
	24VDC nominal input models				18	
	48VDC nominal input models				36	
Shutdown Voltage	12VDC nominal input models		7.3	7.7	8.1	VDC
	24VDC nominal input models		15.5	15.9	16.3	
	48VDC nominal input models		31.6	32	32.5	
Input Surge Voltage (1sec, max.)	12VDC nominal input models				30	VDC
	24VDC nominal input models				50	
	48VDC nominal input models				100	
Input Current	No Load		See Table			
Input Filter (See Note 1)			Pi type			
OUTPUT SPECIFICATIONS						
Output Voltage			See Table			
Voltage Accuracy			-1.0		+1.0	%
Line Regulation	Low line to high line at full load		-0.1		+0.1	%
Load Regulation	No load to full load	3.3V & 5V Output Models	-0.2		+0.2	%
		Others	-0.1		+0.1	
Voltage Adjustability	Maximum output deviation is inclusive of remote sense		-20		+10	%
Remote Sense (See Note 2)	% of Vo (nom)				10	%
Output Power			See Table			
Output Current			See Table			
Minimum Load			0			%
Maximum Capacitive Load	Minimum input and constant resistive load		See Table			
Ripple & Noise (20MHz BW)	Measured with a 22µF/25V X7R MLCC	3.3V & 5V Output Models		75		mVp-p
	Measured with a 22µF/25V X7R MLCC	12V & 15V Output Models		100		
	Measured with a 4.7µF/50V X7R MLCC	24V & 30V Output Models		200		
	Measured with a 2.2µF/100V X7R MLCC	48V Output Models		300		
Transient Response Recovery Time	25% load step change			250		µs
Start-Up Time	Constant resistive load	Power Up		75	100	ms
		Remote On/Off		75	100	
Temperature Coefficient			-0.02		+0.02	%/°C
PROTECTION						
Short Circuit Protection			Continuous, automatic recovery			
Over Load Protection	% of rated Iout; hiccup mode		110		140	%
Over Voltage Protection	% of Vo (nom); hiccup mode		115		130	%
Over Temperature Protection				+110		°C
GENERAL SPECIFICATIONS						
Efficiency	Nominal input voltage and full load		See Table			
Switching Frequency			270	300	330	kHz
Isolation Voltage	1 minute (basic insulation)	Input to Output	2250			VDC
		Input/Output to Base-plate	2250			VDC
Isolation Resistance	500VDC		1			GΩ
Isolation Capacitance					1500	pF
REMOTE ON/OFF (See Note 5)						
Positive Logic (standard)	Referenced to –Input pin	DC/DC ON	Open or 3~12 VDC			VDC
		DC/DC OFF	Short or 0~1.2VDC			
Negative Logic (optional)	Referenced to –Input pin	DC/DC ON	Short or 0~1.2 VDC			VDC
		DC/DC OFF	Open or 3~12VDC			
Input Current of Remote Control Pin	Nominal Vin		-0.5		1	mA
Remote OFF State Input Current	Nominal Vin			3		mA

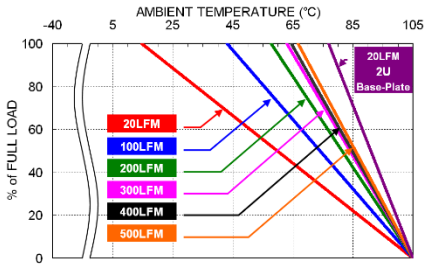
SPECIFICATIONS: DCQA100 SERIES

All specifications are based on 25°C, Nominal Input Voltage, and Full Load unless otherwise noted.
We reserve the right to change specifications based on technological advances.

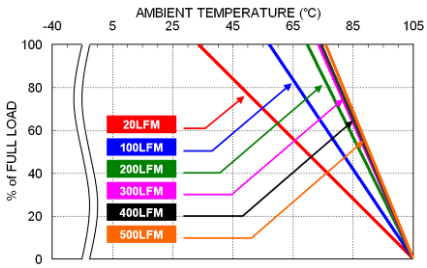
SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit
ENVIRONMENTAL SPECIFICATIONS						
Operating Base-Plate Temperature			-40		+105	°C
Storage Temperature Range			-55		+125	°C
Thermal Impedance (See Note 6)	Vertical direction by natural convection (20LFM)	Without Heatsink		9		°C/W
		With 0.24" Height Heatsink		7.1		
		With 0.5" Height Heatsink		5.5		
		Mounted on 2U iron base-plate		2.8		
Relative Humidity			5		95	% RH
Thermal Shock				MIL-STD-810F		
Vibration				MIL-STD-810F		
MTBF	MIL-HDBK-217F, full load			387,300 Hours		
PHYSICAL SPECIFICATIONS						
Weight				2.26oz (64g)		
Dimensions (L x W x H)				2.28x1.45x0.50 inch (57.9x36.8x12.7 mm)		
Case Material				Aluminum base-plate with plastic case		
Potting Material				Silicon (UL94-V0)		
SAFETY & EMC CHARACTERISTICS						
Safety Approvals				IEC60950-1, UL60950-1(9), EN60950-1		
EMI (See Note 3)	EN55032			Class A, Class B		
ESD	EN61000-4-2	Air ±8kV Contact ±6kV		Perf. Criteria A		
Radiated Immunity	EN61000-4-3	20 V/m		Perf. Criteria A		
Fast Transient (See Note 4)	EN61000-4-4	±2kV		Perf. Criteria A		
Surge (See Note 4)	EN61000-4-5	EN55024: ±2kV		Perf. Criteria A		
Conducted Immunity	EN61000-4-6	10 Vrms		Perf. Criteria A		
Power Frequency Magnetic Field	EN61000-4-8	100A/m continuous; 1000A/m 1 sec		Perf. Criteria A		

CHARACTERISTIC CURVES

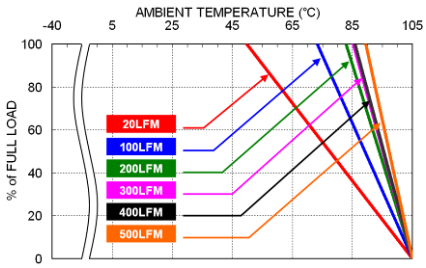
DCQA100-48S05 Derating Curve



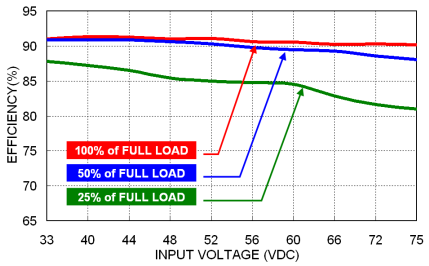
DCQA100-48S05 Derating Curve w/ 0.24" Heatsink



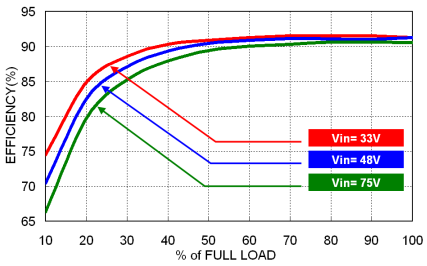
DCQA100-48S05 Derating Curve w/ 0.5" Heatsink



DCQA100-48S05 Efficiency vs Input Voltage



DCQA100-48S05 Efficiency vs Output Load



OUTPUT VOLTAGE ADJUSTMENT

Output is adjustable for 10% trim up or -20% trim down of nominal output voltage by connecting an external resistor between the TRIM pin and either the +SENSE or -SENSE pins.
With an external resistor between the TRIM and -SENSE pin, the output voltage set decreases.
With an external resistor between the TRIM and +SENSE pin, the output voltage set point increases.
Maximum output deviation is +10% inclusive of remote sense. The external trim resistor needs to be at least 1/8 of rated powerThe value of the external resistor can be obtained by the equations below.

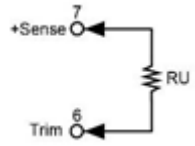
Trim Up Equation

$$R_U = \left(\frac{5.11 V_{OUT}(100+\Delta\%)}{1.225\Delta\%} - \frac{(511+10.22\Delta\%)}{\Delta\%} \right) K\Omega$$

Trim Down Equation

$$R_D = \left(\frac{511}{\Delta\%} - 10.22 \right) K\Omega$$

TRIM UP



3.3V Output Models

ΔV (%)	1	2	3	4	5	6	7	8	9	10
Vout (V)	3.333	3.366	3.399	3.432	3.465	3.498	3.531	3.564	3.597	3.630
RU (kΩ)	869.117	436.331	292.07	219.939	176.66	147.808	127.198	111.742	99.72	90.103

5V Output Models

ΔV (%)	1	2	3	4	5	6	7	8	9	10
Vout (V)	5.05	5.10	5.15	5.20	5.25	5.30	5.35	5.40	5.45	5.50
RU (kΩ)	1585.35	797.994	535.542	404.316	325.58	273.09	235.596	207.479	185.605	168.109

12V Output Models

ΔV (%)	1	2	3	4	5	6	7	8	9	10
Vout (V)	12.12	12.24	12.36	12.48	12.60	12.72	12.84	12.96	13.08	13.20
RU (kΩ)	4534.55	2287.19	1538.08	1163.52	938.78	788.956	681.939	601.676	539.25	489.309

15V Output Models

ΔV (%)	1	2	3	4	5	6	7	8	9	10
Vout (V)	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	16.50
RU (kΩ)	5798.49	2925.42	1967.73	1488.89	1201.58	1010.04	873.229	770.619	690.812	626.966

24V Output Models

ΔV (%)	1	2	3	4	5	6	7	8	9	10
Vout (V)	24.24	24.48	24.72	24.96	25.20	25.44	25.68	25.92	26.16	26.40
RU (kΩ)	9590.32	4840.11	3256.7	2465	1989.98	1673.3	1447.1	1277.45	1145.5	1039.94

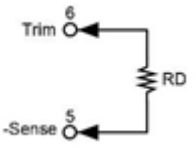
30V Output Models

ΔV (%)	1	2	3	4	5	6	7	8	9	10
Vout (V)	30.3	30.6	30.9	31.2	31.5	31.8	32.1	32.4	32.7	33
RU (kΩ)	12118.2	6116.57	4116.02	3115.74	2515.58	2115.47	1829.68	1615.33	1448.62	1315.25

48V Output Models

ΔV (%)	1	2	3	4	5	6	7	8	9	10
Vout (V)	48.48	48.96	49.44	49.92	50.40	50.88	51.36	51.84	52.32	52.80
RU (kΩ)	19701.9	9945.94	6693.96	5067.97	4092.38	3441.99	2977.42	2628.99	2357.99	2141.19

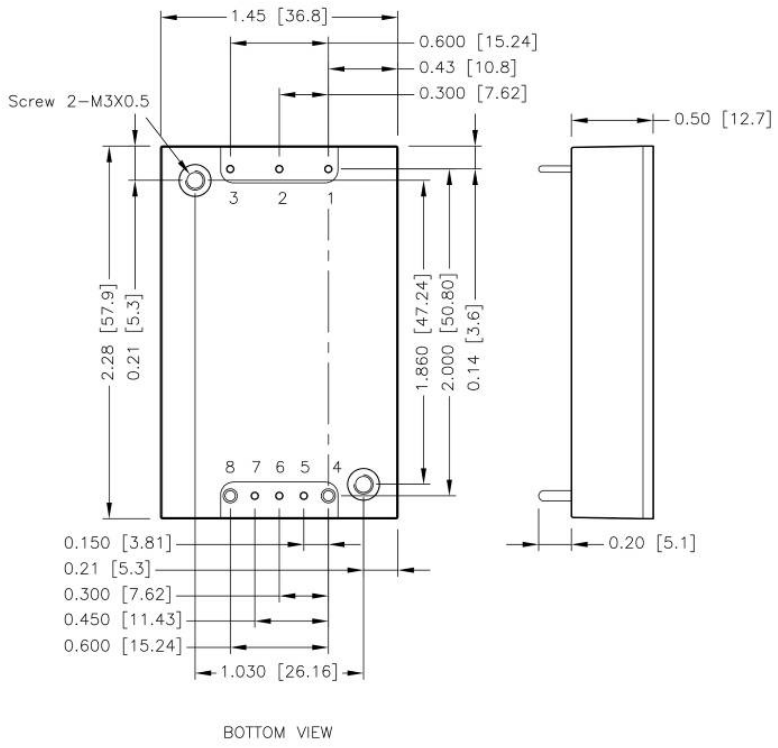
TRIM DOWN



All Outputs

ΔV (%)	1	2	3	4	5	6	7	8	9	10
RD (kΩ)	500.78	245.28	160.113	117.53	91.98	74.947	62.78	53.655	46.558	40.88
ΔV (%)	11	12	13	14	15	16	17	18	19	20
RD (kΩ)	36.235	32.363	29.088	26.28	23.847	21.718	19.839	18.169	16.675	15.33

MECHANICAL DRAWING

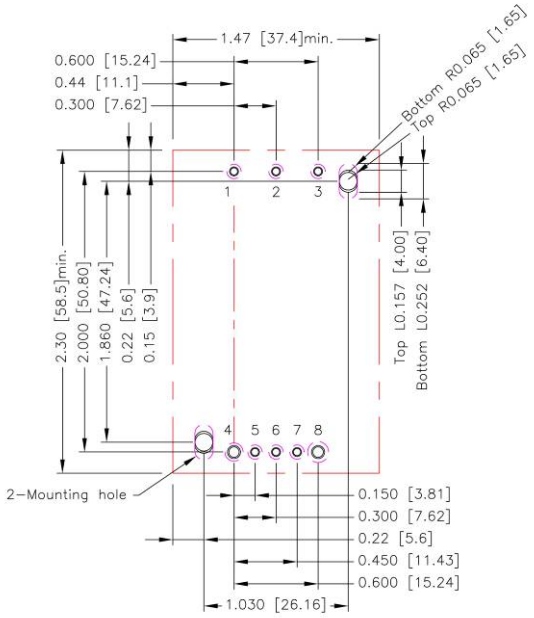


PIN CONNECTION

PIN	DEFINE	DIAMETER
1	-Vin	0.04 Inch
2	Ctrl	0.04 Inch
3	+Vin	0.04 Inch
4	-Vout	0.06 Inch
5	-Sense	0.04 Inch
6	Trim	0.04 Inch
7	+Sense	0.04 Inch
8	+Vout	0.06 Inch

Notes:
1. All dimensions in inch [mm]
2. Tolerance: x.xx±0.02 [x.x±0.5]
   x.xxx±0.01 [x.xxx±0.25]
3. Pin pitch tolerance: ±0.01 [0.25]
4. Pin dimension tolerance ±0.004 [0.10]
5. The screw locked torque: MAX 3.5kgf-cm [0.34N-m]

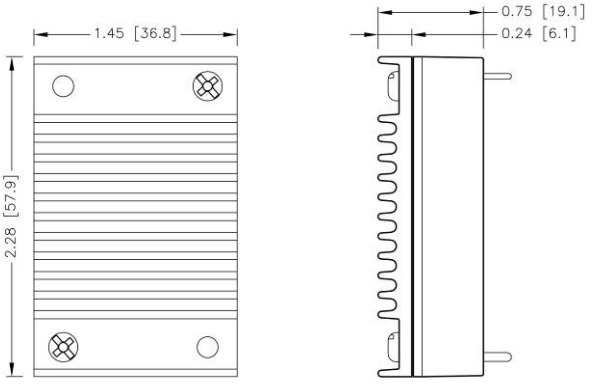
RECOMMENDED PAD LAYOUT



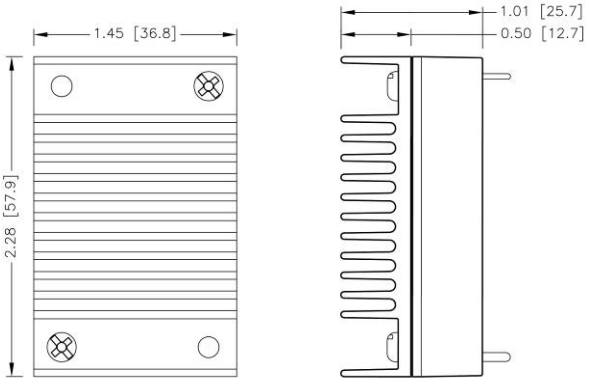
Notes:
All dimensions in inch [mm]
Pad size (lead free recommended)
Through Hole 1.2.3.5.6.7: Ø0.051 [1.30]
Through Hole 4.8: Ø0.075 [1.90]
Through Hole of Mounting: Ø0.126 [3.20]
Top View Pad 1.2.3.5.6.7: Ø0.064 [1.63]
Top View Pad 4.8: Ø0.094 [2.38]
Top View Pad of Mounting: Groove R0.065 [1.65] L0.157 [4.00]
Bottom View Pad 1.2.3.5.6.7: Ø0.102 [2.60]
Bottom View Pad 8: Ø0.150 [3.80]
Bottom View Pad 4: Ø0.130 [3.30]
Bottom View Pad of Mounting: Groove R0.065 [1.65] L0252 [6.40]

HEATSINK OPTIONS

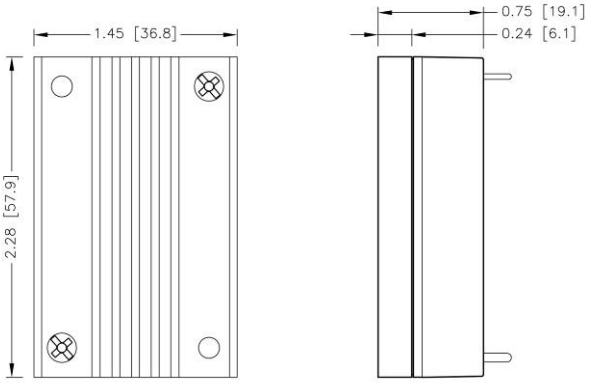
Horizontal Fin Orientation (Suffix Option: H) 7G-0029B-F



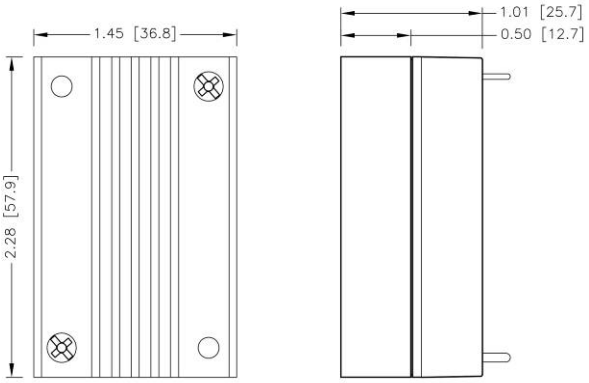
Horizontal Fin Orientation (Suffix Option: H1) 7G-0030B-F



Vertical Fin Orientation (Suffix Option: H2) 7G-0031B-F



Vertical Fin Orientation (Suffix Option: H3) 7G-0032B-F

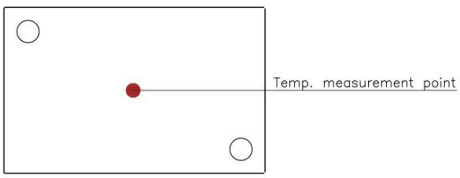


Note: Models with thru-hole inserts cannot be equipped with a heatsink
All dimensions in inch [mm]
Tolerance: x.xx±0.02 [x.x±0.5]

THERMAL CONSIDERATION

This power module operates in a variety of thermal environments.
However, sufficient cooling should be provided to help ensure reliable operation of the unit.
Heat is removed by conduction, convection, and radiation to the surrounding environment.
Proper cooling can be verified by measuring the point in the figure below.
The temperature at this location should not exceed 105ºC.
When operating, adequate cooling must be provided to maintain the test point temperature at or below 105ºC.
Although the maximum point, temperature of the power modules is 105ºC, you can limit this temperature to a lower value for extremely high reliability.

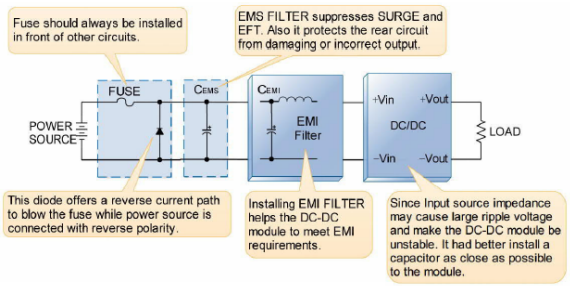
- Thermal test condition with vertical direction by national convection (20LFM)
- The iron base-plate dimension is 19” x 3.5” x 0.063” (the height is EIA standard 2U)
- The heat-sink is optional and P/N: 7G-0029B-F, 7G-0030B-F, 7G-0031B-F, 7G-0032B-F



BASE PLATE

TYPICAL APPLICATION

- Below shows some blocks connected between power source and DC/DC module. Install the circuit of the block which is required.
- Each block has individual function and should be placed on the corresponding location.
- If C_{EMI} is an aluminum electrolytic capacitor and connected in parallel with C_{EMS}, the capacitance we recommend for meeting EMS requirements could be C_{EMS} plus C_{EMI}.



Typical Application

- Input source impedance: the power modules will operate as specified without external components, assuming that the source voltage has a very low impedance and reasonable input voltage regulation. Highly inductive source impedances can affect the stability of the power module. Since real-world voltage source has finite impedance, performance can be improved by adding external filter capacitor. For this series, it is recommended to use Nippon Chemi-con KY series, 100μF/100V.

LINE PROTECTIONS

FUSE

- The DC/DC Converter is not internally fused. An input line fuse must always be used.
- Fuses should be installed in front of each module when multiple DC/DC converters connect to the same power source.

Model	Fuse Rating	Fuse Type
12VDC nominal input models	20A	Fast-Acting
24VDC nominal input models	10A	Fast-Acting
48VDC nominal input models	6.3A	Slow-Blow

- According to actual current value, calculate fuse ratings based on the following equations:

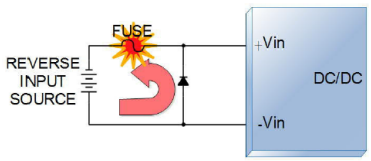
$I_{FUSE} \geq I_{in}/(\text{Rerating x Safety margin})$

$\text{Melting } I^2t = I^2_{PULSE.act} \cdot t/0.22$

Where:
I_{FUSE} is current rating of fuse
I_{in} is actual value of input current
Rerating is percentage of fuse rating based on ambient temperature. Fuse rating varies under different ambient temperatures.
Safety margin is percentage of fuse rating set by user.
Melting I^2t is pulse energy rating of fuse.
$I_{PULSE.act}$ is actual input pulse current
t is the width of the input pulse current

Reverse Input Voltage Protection

- Avoid the reverse polarity input voltage; otherwise, it will damage the DC/DC converter.
- It is likely to protect the module from the reverse input voltage by installing an external diode.
- The diode can blow the line fuse to protect DC/DC converter.
- It is recommended to use Schottky diode for reverse input voltage protection.



Reverse Input Voltage Protection

Model	Voltage Rating of Diode	Current Rating of Diode
12VDC nominal input models	40V	1~1.5 x Fuse Rating
24VDC nominal input models	60V	
48VDC nominal input models	100V	

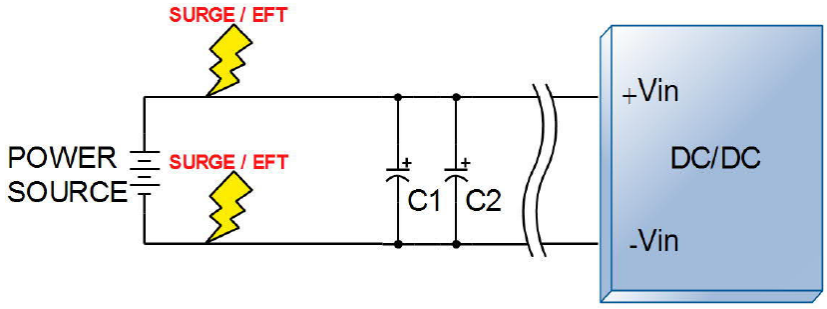
Reverse Protection Diode Selection

EMS CONSIDERATIONS

- The module can meet EMS requirements as below
- An external input filter capacitor is required if the module has to meet EN61000-4-4, EN61000-4-5

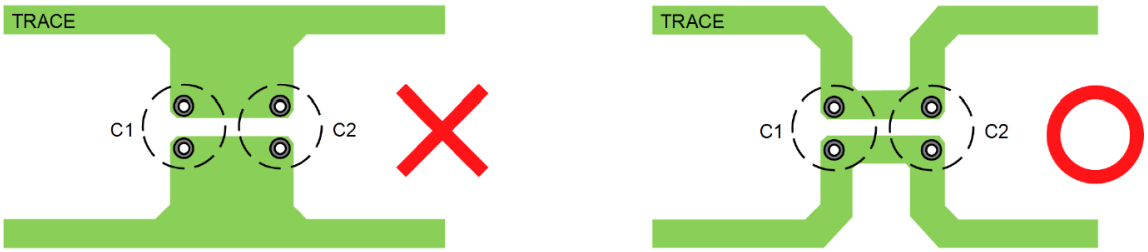
Parameter	Conditions		Level
ESD	EN61000-4-2	Air ±8kV and Contact ±6kV	Perf. Criteria A
Radiated Immunity	EN61000-4-3	20 V/m	Perf. Criteria A
Fast Transient	EN61000-4-4	±2kV	Perf. Criteria A
Surge	EN61000-4-5	EN55024: ±2kV	Perf. Criteria A
Conducted Immunity	EN61000-4-6	10 Vrms	Perf. Criteria A
Power Frequency Magnetic Field	EN61000-4-8	100A/m continuous; 1000A/m 1 sec	Perf. Criteria A

EMS Requirements



Surge & EFT Protections

- Take note of the current path of the PCB trace. Wrong PCB layout reduced ability of suppressing SURGE or EFT.



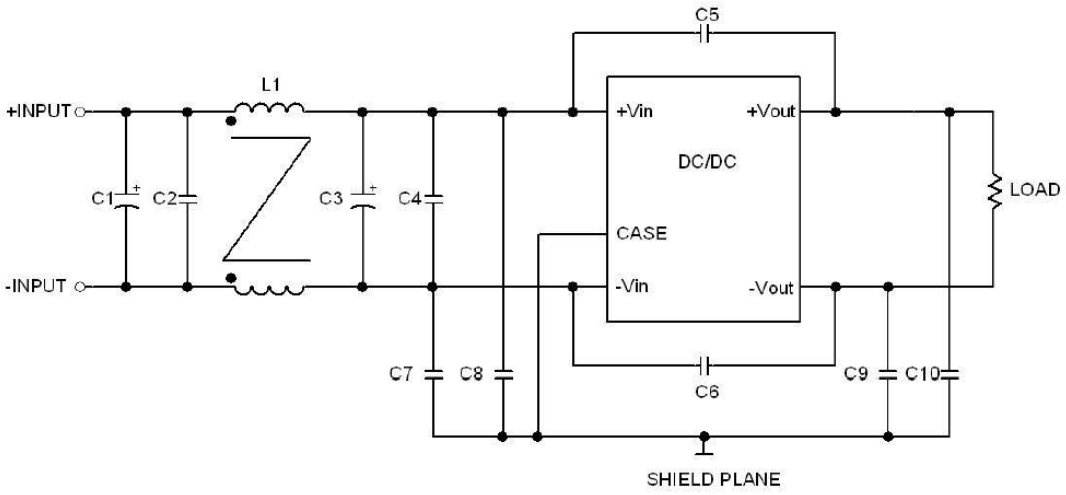
PCB Trace

Model	Component	Specification	Reference
12VDC nominal input models	C1, C2	220μF/100V	Nippon Chemi-con KY series
24VDC nominal input models			
48VDC nominal input models			

Surge & EFT Filter

EMI CONSIDERATIONS

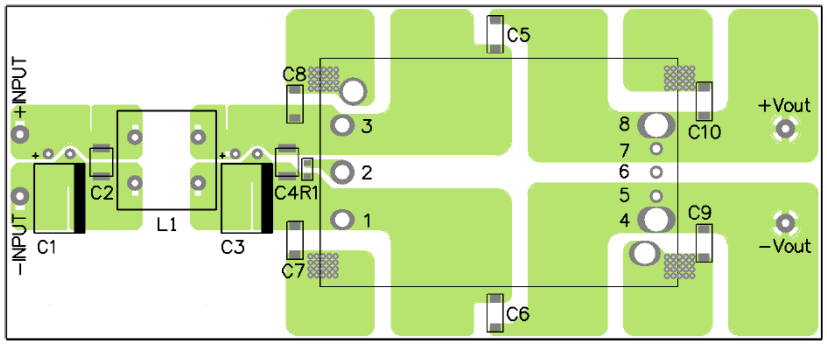
Recommended External EMI Filter for EN55032 Class A



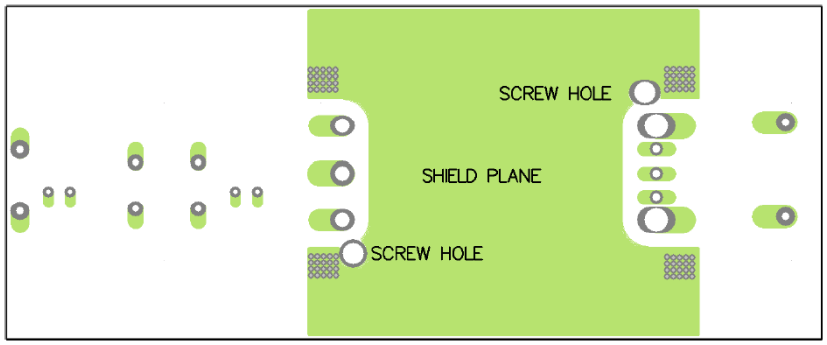
Recommended EMI Filter for EN55032 Class A

Model	C1, C3	C2, C4	C5, C6, C7, C8, C9, C10	L1
12VDC nominal input models	100µF/50V Al Cap. (lie down) Chemi-con KY	6.8µF/50V 1812 MLCC	1000pF/3kV 1808 MLCC	285µH, PMT-103

B.O.M of External EMI Filter



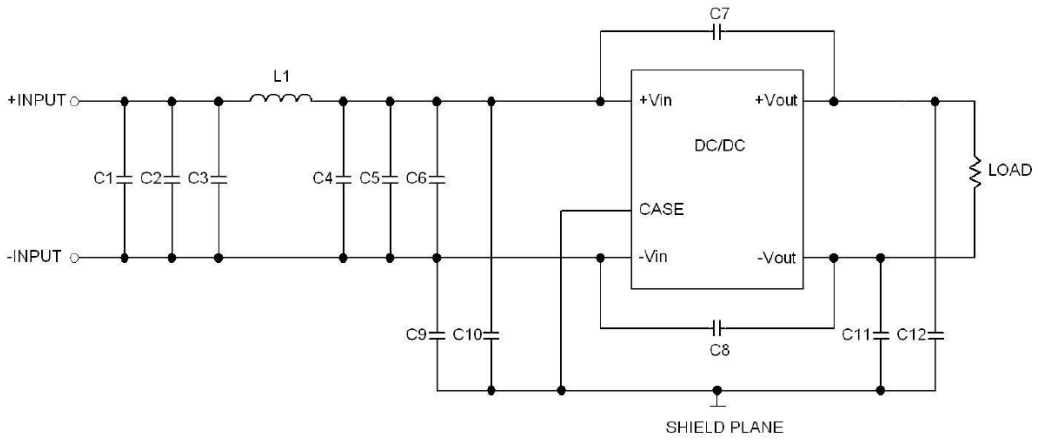
TOP VIEW



BOTTOM VIEW

Recommended Layout Pattern

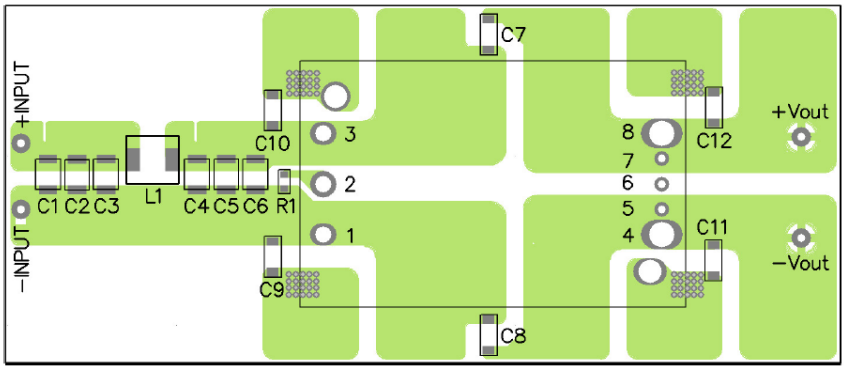
Recommended External EMI Filter for EN55032 Class A



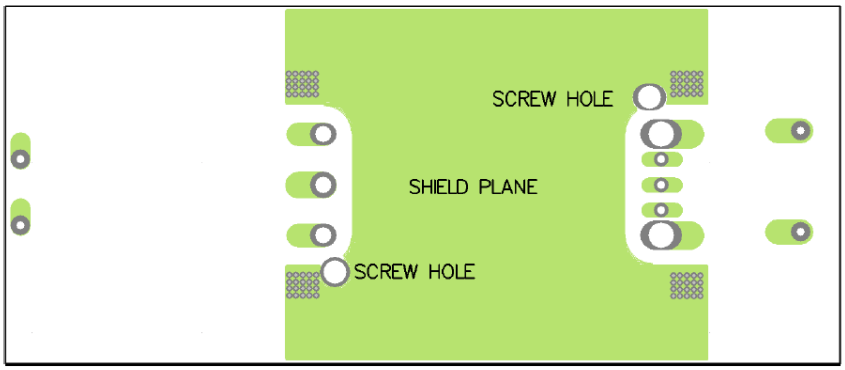
Recommended EMI Filter for EN55032 Class A

Model	C1, C2, C3, C4, C5, C6	C7, C8, C9, C10, C11, C12	L1
24VDC nominal input models	10µF/50V 1812 MLCC	1000pF/3kV 1808 MLCC	0.68µH, PMT-114

B.O.M. of External EMI Filter



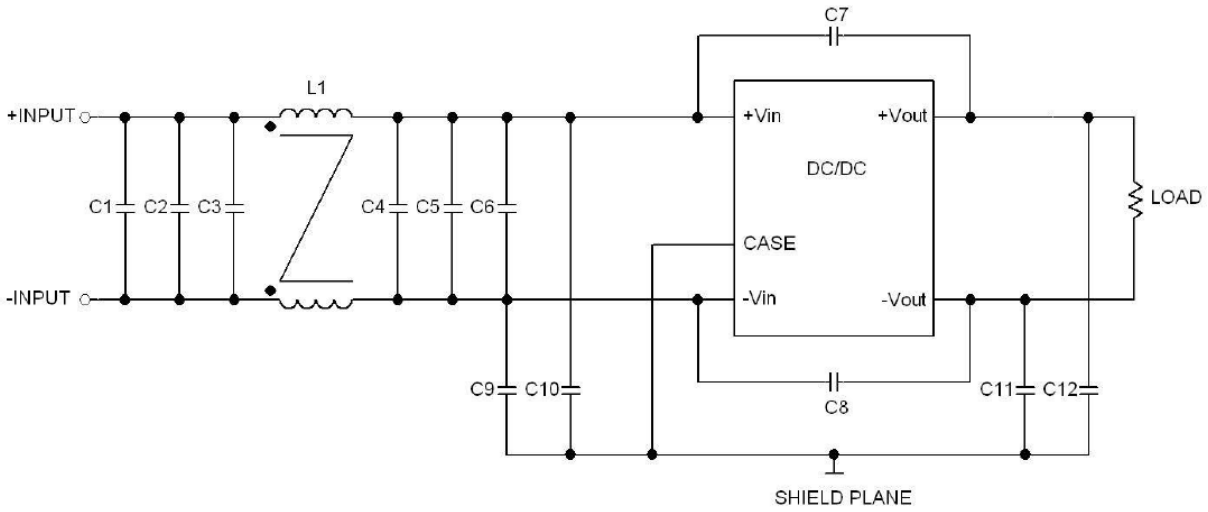
TOP VIEW



BOTTOM VIEW

Recommended Layout Pattern

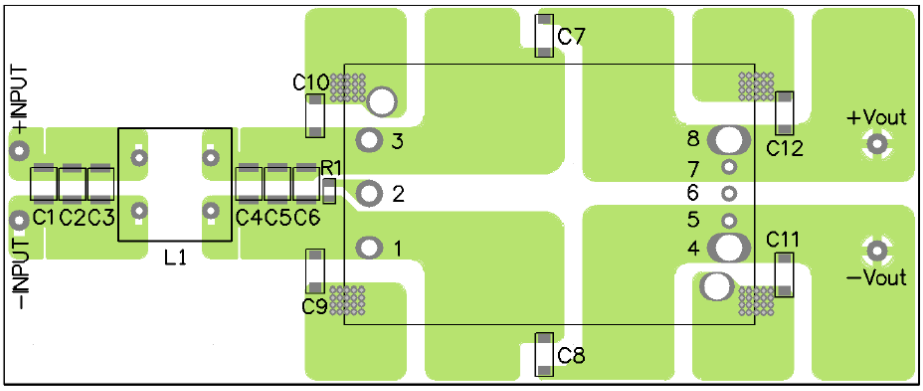
Recommended External EMI Filter for EN55032 Class A



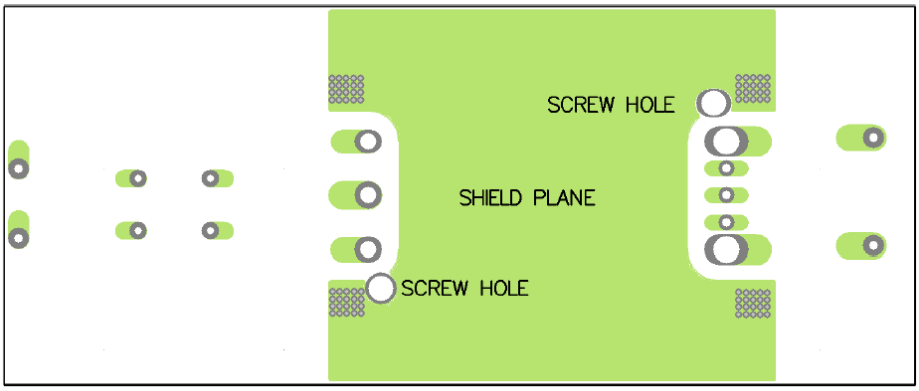
Recommended EMI Filter for EN55032 Class A

Model	C1, C2, C3, C4, C5, C6	C7, C8, C9, C10, C11, C12	L1
48VDC nominal input models	4.7µF/100V 1812 MLCC	1000pF/3kV 1808 MLCC	620µH, PMT-067

B.O.M. of External EMI Filter



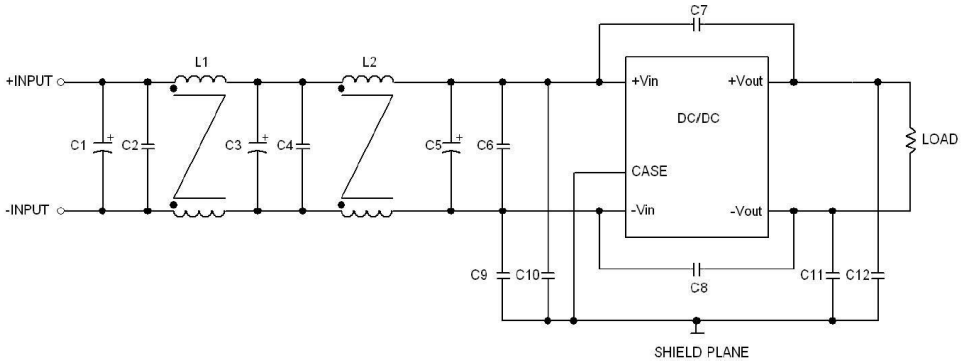
TOP VIEW



BOTTOM VIEW

Recommended Layout Pattern

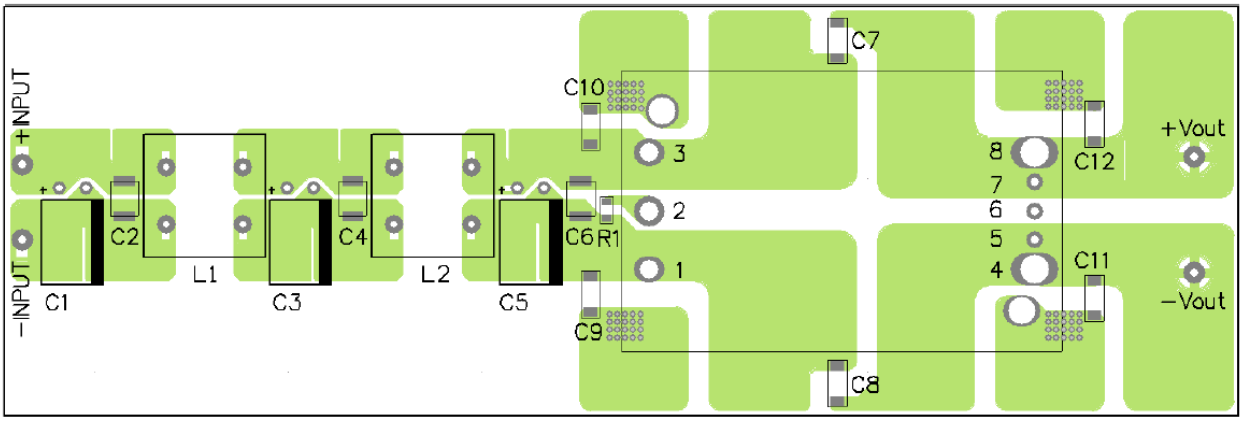
Recommended External EMI Filter for EN55032 Class B



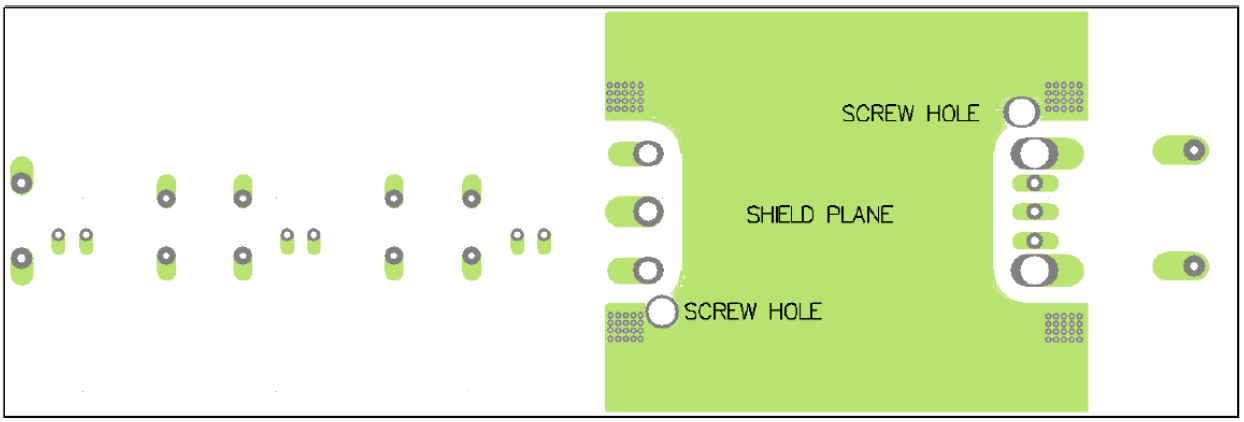
Recommended EMI Filter for EN55032 Class B

Model	C1, C3, C5	C2, C4, C6	C7, C8, C9, C10, C11, C12	L1, L2
12VDC nominal input models	100µF/50V Al Cap. (lie down) Chemi-con KY	6.8µF/50V 1812 MLCC	1000pF/3kV 1808 MLCC	285µH, PMT-103

B.O.M. of External EMI Filter



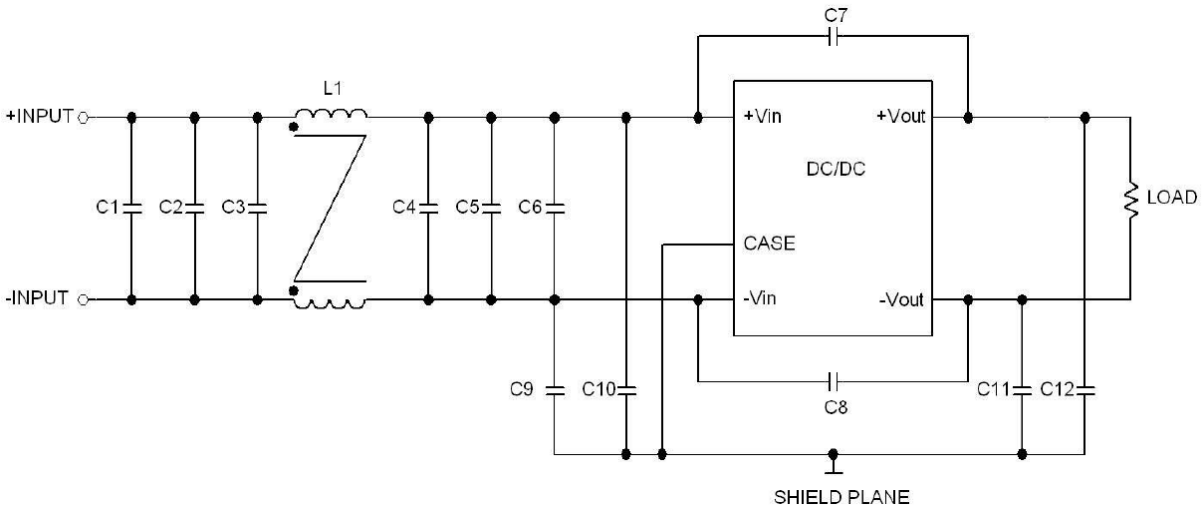
TOP VIEW



BOTTOM VIEW

Recommended Layout Pattern

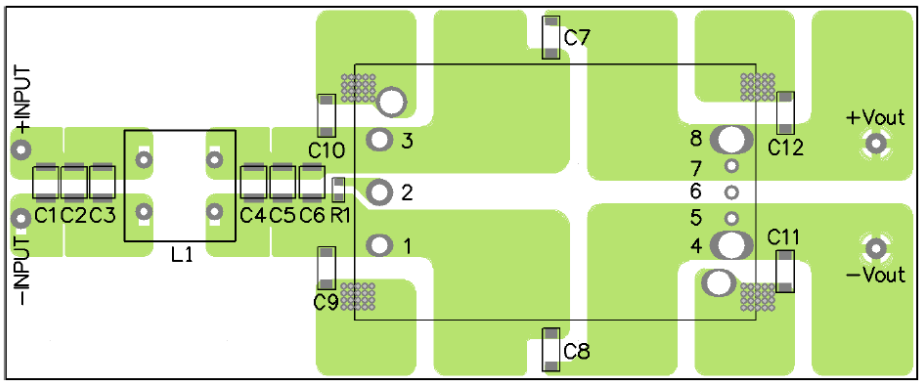
Recommended External EMI Filter for EN55032 Class B



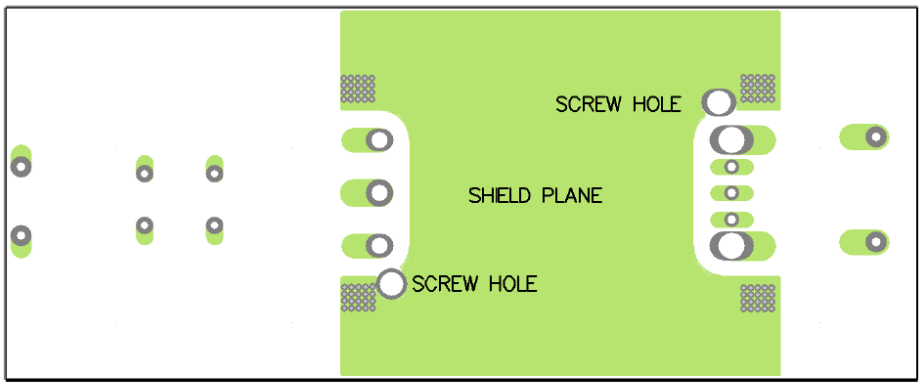
Recommended EMI Filter for EN55032 Class B

Model	C1, C2, C3, C4, C5, C6	C7, C8, C9, C10, C11, C12	L1
24VDC nominal input models	10µF/50V 1812 MLCC	1000pF/3kV 1808 MLCC	620µH, PMT-067

B.O.M of External EMI Filter



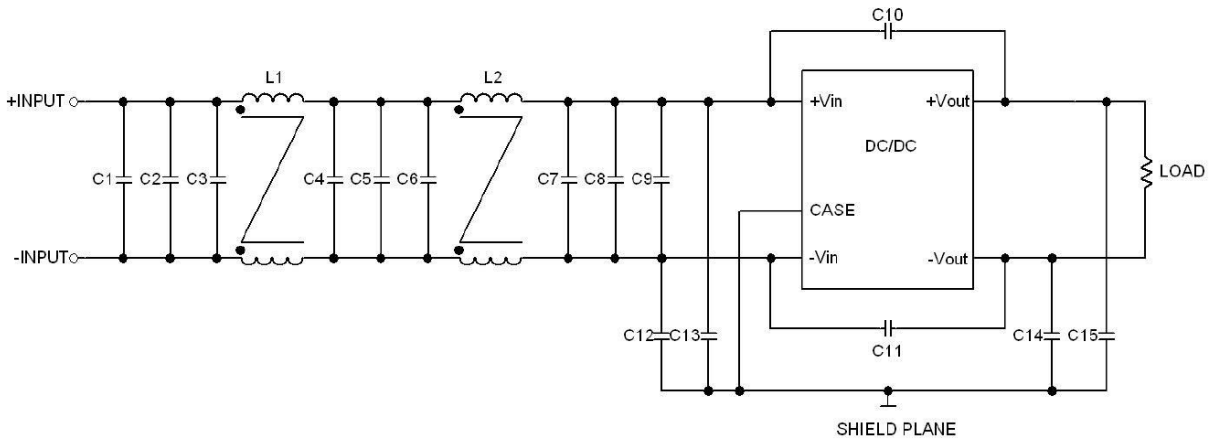
TOP VIEW



BOTTOM VIEW

Recommended Layout Pattern

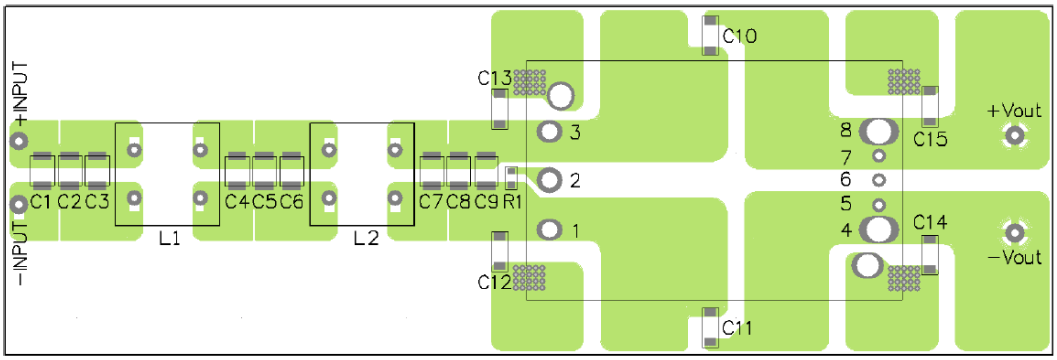
Recommended External EMI Filter for EN55032 Class B



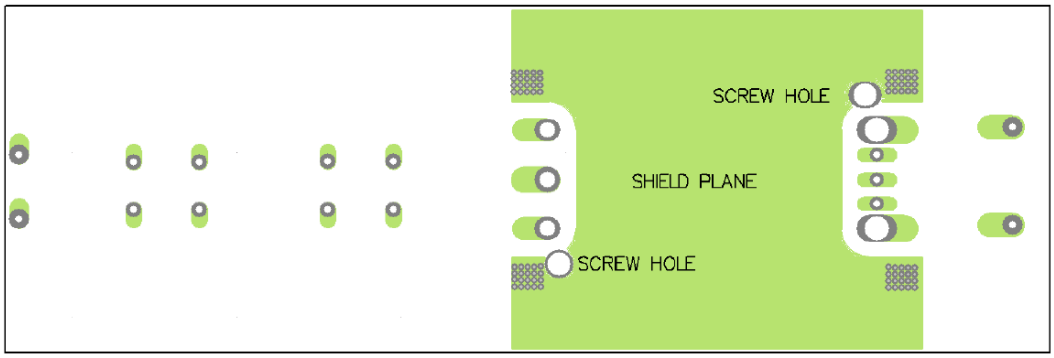
Recommended EMI Filter for EN55032 Class B

Model	C1, C2, C3, C4, C5, C6, C7, C8, C9	C10, C11, C12, C13, C14, C15	L1	L2
48VDC nominal input models	4.7µF/100V 1812 MLCC	1000pF/3kV 1808 MLCC	620µH, PMT-067	285µF, PMT-103

B.O.M of External EMI Filter



TOP VIEW



BOTTOM VIEW

Recommended Layout Pattern

MODEL NUMBER SETUP

DCQA	100	-	48	S	05	R	H (1)
Series Name	Output Power		Input Voltage	Output Quantity	Output Voltage	Remote ON/OFF	Hole Thread & Heatsink Options
	100: 100 Watts		**12:** 8.5~22 VDC **24:** 16.5~36 VDC **48:** 33~75 VDC	**S:** Single Output	**33:** 3.3 VDC **05:** 5 VDC **12:** 12 VDC **15:** 15 VDC **24:** 24 VDC **30:** 30 VDC **48:** 48 VDC	**None:** Positive Logic **R:** Negative Logic	**None:** M3x0.5 Threaded-thru Inserts **TH:** Ø.126 Thru-hole Inserts (1) **H:** 0.24" Horizontal Heatsink **H1:** 0.5" Horizontal Heatsink **H2:** 0.24" Vertical Heatsink **H3:** 0.5" Vertical Heatsink

(1) Models with thru-hole inserts cannot be equipped with a heatsink.

COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

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