

# RP610

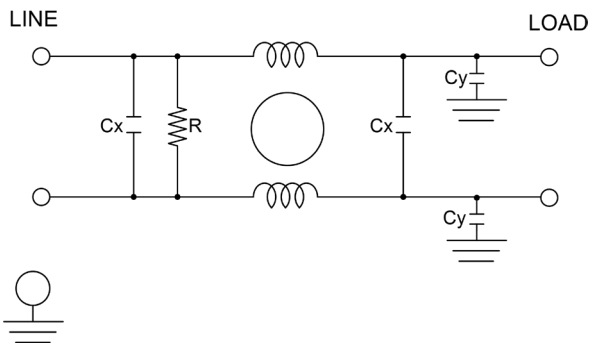
## HIGH PERFORMANCE SINGLE STAGE DC POWER LINE FILTER

### FEATURES

- » Rated currents include **3A, 6A, 10A, 12A, and 20A**
- » Single Stage Line Filter
- » Available with **QD** (tabs), **W** (wires), and **S** (studs) option
- » High Performance Design
- » Agency Approved to UL1283 / 60929, CSA C22.2, EN 60939
- » Y-cap value can be adjusted to fit specification



### ELECTRICAL SCHEMATIC



### SPECIFICATIONS

|                               |                  |
|-------------------------------|------------------|
| <b>MAX. OPERATING VOLTAGE</b> | 250V +10%        |
| <b>AMBIENT TEMPERATURE</b>    | -25 TO 55°C      |
| <b>CLIMATIC CATEGORY</b>      | 25/100/21        |
| <b>TERMINALS (-T)</b>         | QD TABS: 0.25"   |
|                               | WIRE LEADS       |
|                               | STUDS 3-20A (M4) |
| <b>TYP. WEIGHT, LBS (KG)</b>  | 0.7 (0.3)        |

### HIPOT RATINGS

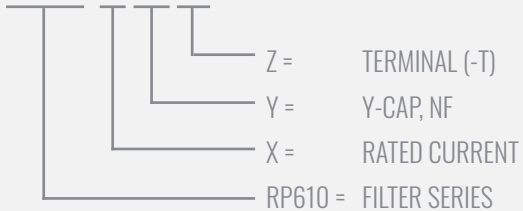
|                       |          |
|-----------------------|----------|
| <b>LINE TO GROUND</b> | 1800 VDC |
|-----------------------|----------|

### TYPICAL APPLICATIONS

- ✓ High power rectifiers
- ✓ Uninterrupted power supplies
- ✓ Inverters
- ✓ VFD
- ✓ PWM

### HOW TO ORDER

RP610-X-Y-Z



**NOTE:** USE ANY COMBINATION OF -X (AMPS) WITH ANY -Y RATINGS  
E.G. **RP610-10-1000-S** (10AMPS WITH 1000 NF YCAP)

For **X, Y,** and **Z** options see product specification table.

# RP610

## HIGH PERFORMANCE SINGLE STAGE DC POWER LINE FILTER

| MODEL NO.        | RATED CURRENT, A @ 40° C | Y-CAP, nF | TERMINAL OPTIONS   |                   |                   | MAX. DIMENSIONS" (MM) |           |           |
|------------------|--------------------------|-----------|--------------------|-------------------|-------------------|-----------------------|-----------|-----------|
|                  |                          |           | (QD) INPUT/ OUTPUT | (W) INPUT/ OUTPUT | (S) INPUT/ OUTPUT | WIDTH                 | (LENGTH)  | HEIGHT    |
| RP610-3-4.7-QD   | 3                        | 4.7       | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-3-4.7-S    | 3                        | 4.7       |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-3-4.7-W    | 3                        | 4.7       |                    | ✓                 |                   | *                     | *         | *         |
| RP610-3-10-QD    | 3                        | 10        | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-3-10-S     | 3                        | 10        |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-3-10-W     | 3                        | 10        |                    | ✓                 |                   | *                     | *         | *         |
| RP610-3-100-QD   | 3                        | 100       | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-3-100-S    | 3                        | 100       |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-3-100-W    | 3                        | 100       |                    | ✓                 |                   | *                     | *         | *         |
| RP610-3-1000-QD  | 3                        | 1000      | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-3-1000-S   | 3                        | 1000      |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-3-1000-W   | 3                        | 1000      |                    | ✓                 |                   | *                     | *         | *         |
| RP610-6-4.7-QD   | 6                        | 4.7       | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-6-4.7-S    | 6                        | 4.7       |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-6-4.7-W    | 6                        | 4.7       |                    | ✓                 |                   | *                     | *         | *         |
| RP610-6-10-QD    | 6                        | 10        | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-6-10-S     | 6                        | 10        |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-6-10-W     | 6                        | 10        |                    | ✓                 |                   | *                     | *         | *         |
| RP610-6-100-QD   | 6                        | 100       | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-6-100-S    | 6                        | 100       |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-6-100-W    | 6                        | 100       |                    | ✓                 |                   | *                     | *         | *         |
| RP610-6-1000-QD  | 6                        | 1000      | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-6-1000-S   | 6                        | 1000      |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-6-1000-W   | 6                        | 1000      |                    | ✓                 |                   | *                     | *         | *         |
| RP610-10-4.7-QD  | 10                       | 4.7       | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-10-4.7-S   | 10                       | 4.7       |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-10-4.7-W   | 10                       | 4.7       |                    | ✓                 |                   | *                     | *         | *         |
| RP610-10-10-QD   | 10                       | 10        | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-10-10-S    | 10                       | 10        |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-10-10-W    | 10                       | 10        |                    | ✓                 |                   | *                     | *         | *         |
| RP610-10-100-QD  | 10                       | 100       | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-10-100-S   | 10                       | 100       |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-10-100-W   | 10                       | 100       |                    | ✓                 |                   | *                     | *         | *         |
| RP610-10-1000-QD | 10                       | 1000      | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |

**ADDITIONAL MODEL NO. >>**

# RP610

## HIGH PERFORMANCE SINGLE STAGE DC POWER LINE FILTER

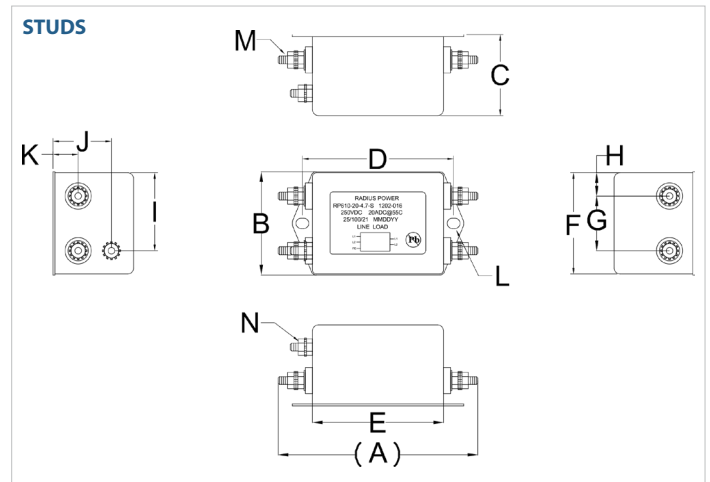
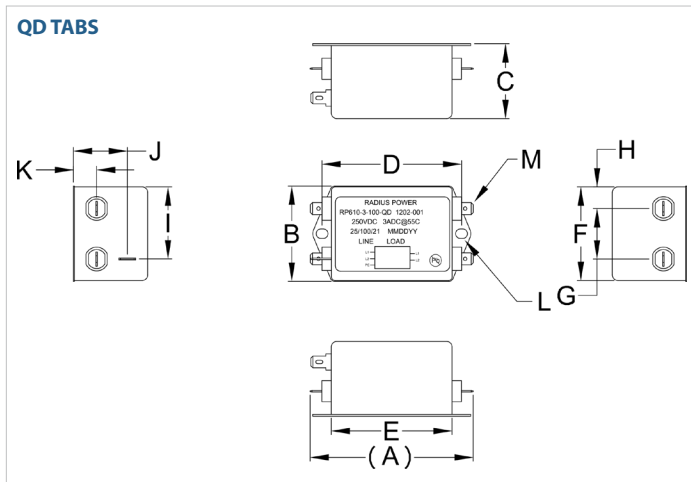
| MODEL NO.        | RATED CURRENT, A @ 40° C | Y-CAP, nF | TERMINAL OPTIONS   |                   |                   | MAX. DIMENSIONS" (MM) |           |           |
|------------------|--------------------------|-----------|--------------------|-------------------|-------------------|-----------------------|-----------|-----------|
|                  |                          |           | (QD) INPUT/ OUTPUT | (W) INPUT/ OUTPUT | (S) INPUT/ OUTPUT | WIDTH                 | (LENGTH)  | HEIGHT    |
| RP610-10-1000-S  | 10                       | 1000      |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-10-1000-W  | 10                       | 1000      |                    | ✓                 |                   | *                     | *         | *         |
| RP610-12-10-QD   | 12                       | 10        | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-12-10-S    | 12                       | 10        |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-12-10-W    | 12                       | 10        |                    | ✓                 |                   | *                     | *         | *         |
| RP610-12-100-QD  | 12                       | 100       | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-12-100-S   | 12                       | 100       |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-12-100-W   | 12                       | 100       |                    | ✓                 |                   | *                     | *         | *         |
| RP610-12-1000-QD | 12                       | 1000      | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-12-1000-S  | 12                       | 1000      |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-12-1000-W  | 12                       | 1000      |                    | ✓                 |                   | *                     | *         | *         |
| RP610-20-4.7-QD  | 20                       | 4.7       | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-20-4.7-S   | 20                       | 4.7       |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-20-4.7-W   | 20                       | 4.7       |                    | ✓                 |                   | *                     | *         | *         |
| RP610-20-10-QD   | 20                       | 10        | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-20-10-S    | 20                       | 10        |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-20-10-W    | 20                       | 10        |                    | ✓                 |                   | *                     | *         | *         |
| RP610-20-100-QD  | 20                       | 100       | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-20-100-S   | 20                       | 100       |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-20-100-W   | 20                       | 100       |                    | ✓                 |                   | *                     | *         | *         |
| RP610-20-1000-QD | 20                       | 1000      | ✓                  |                   |                   | 2.01"(51)             | 3.45"(88) | 1.61"(41) |
| RP610-20-1000-S  | 20                       | 1000      |                    |                   | ✓                 | 2.01"(51)             | 3.90"(99) | 1.57"(40) |
| RP610-20-1000-W  | 20                       | 1000      |                    | ✓                 |                   | *                     | *         | *         |

\*Contact factory for dimensions.

# RP610

## HIGH PERFORMANCE SINGLE STAGE DC POWER LINE FILTER

### RP610 MECHANICAL OUTLINES (MM)



| SERIES         | (A)           | B             | C             | D             | E             | F             | G             | H             | I             | J             | K             | L                                   | M                               | N                |
|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------------------------|---------------------------------|------------------|
| <b>QD TABS</b> | 3.45"<br>(88) | 2.01"<br>(51) | 1.61"<br>(41) | 2.95"<br>(75) | 2.60"<br>(66) | 1.97"<br>(50) | 1.06"<br>(27) | 0.46"<br>(12) | 1.52"<br>(39) | 1.14"<br>(29) | 0.49"<br>(13) | Ø0.25"x0.20", 2x<br>(Ø 6.4x5.1, 2x) | 0.25", 5x<br>QD, MALE, 6.35, 5x | N/A              |
| <b>STUDS</b>   | 3.90"<br>(99) | 2.01"<br>(51) | 1.57"<br>(40) | 2.95"<br>(75) | 2.56"<br>(65) | 1.97"<br>(50) | 1.06"<br>(27) | 0.45"<br>(12) | 1.52"<br>(39) | 1.14"<br>(29) | 0.49"<br>(13) | Ø0.25"x0.20", 2x<br>(Ø 6.4x5.1, 2x) | STUD, M5, 4x                    | STUD,<br>GND, M5 |

TYPICAL TOLERANCE: +/-0.02" (0.50MM)

### TYPICAL INSERTION LOSS, dB (50/50 Ohm)

| Amps | Freq (MHz) | Insertion Loss (dB) |     |     |    |    |
|------|------------|---------------------|-----|-----|----|----|
|      |            | 0.15                | 0.5 | 1.0 | 10 | 30 |
| 3    | CM (dB)    | 40                  | 55  | 65  | 65 | 60 |
|      | DM (dB)    | 40                  | 60  | 65  | 75 | 70 |
| 6    | CM (dB)    | 40                  | 55  | 65  | 65 | 60 |
|      | DM (dB)    | 42                  | 62  | 65  | 75 | 70 |
| 10   | CM (dB)    | 40                  | 55  | 65  | 65 | 60 |
|      | DM (dB)    | 45                  | 65  | 65  | 75 | 70 |
| 12   | CM (dB)    | 40                  | 55  | 65  | 65 | 60 |
|      | DM (dB)    | 45                  | 65  | 65  | 75 | 70 |
| 20   | CM (dB)    | 20                  | 28  | 34  | 55 | 60 |
|      | DM (dB)    | 30                  | 55  | 58  | 60 | 60 |