

# RP110

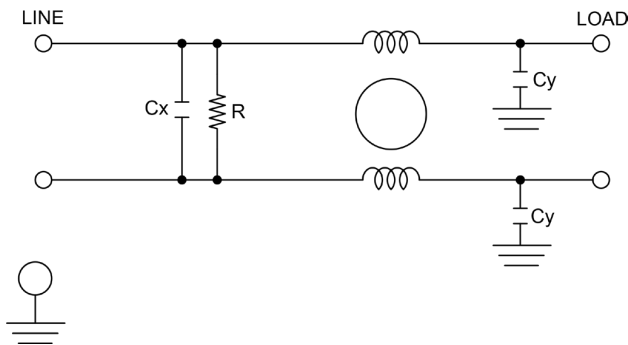
## COMPACT SINGLE STAGE POWER LINE FILTERS

### FEATURES

- » Rated currents include **3 A, 6A, 10 A, 20A, and 30A**
- » Single Stage Line Filter
- » Available with **QD** tabs or **W** (wireleads) and **S** (studs) option
- » Compact Design
- » Agency Approved to UL1283 / 60929, CSA C22.2, EN 60939
- » Y-cap value can be adjusted to fit specifications



### ELECTRICAL SCHEMATIC



### HOW TO ORDER

RP110- X - Y - Z

- Z = TERMINAL (-T)
- Y = Y-CAP, NF
- X = RATED CURRENT
- RP100 = FILTER SERIES

**NOTE:** USE ANY COMBINATION OF -X (AMPS) WITH ANY -Y RATINGS  
E.G. **RP110-10-10-QD** (10AMPS WITH 10 NF YCAP)

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

### SPECIFICATIONS

|                               |   |
|-------------------------------|---|
| OPERATING FREQUENCY           | 50/60Hz   |
| USABLE FREQUENCY              | DC - 400 Hz                                       |
| <b>MAX. OPERATING VOLTAGE</b> | 250V +10%   |
| AMBIENT TEMPERATURE           | -25 TO 40°C                                       |
| CLIMATIC CATEGORY             | 25/100/21   |
| TERMINALS (-T)                | QD: 0.25" TABS<br>WIRE LEADS<br>S: 20A & 30A (M4) |

TYP. WEIGHT, LBS (KG) 0.4 (0.2)

### TYPICAL LEAKAGE CURRENT

|                 |                  |
|-----------------|------------------|
| @ 250 VAC 50 Hz | 0 - 1.57 mA Max. |
| @ 120 VAC 60 Hz | 0 - 0.90 mA Max. |

### HIPOT RATINGS

**LINE TO GROUND** 2700 VDC

### TYPICAL APPLICATIONS

- ✓ Household Appliances
- ✓ Industrial Equipment
- ✓ Medical Devices
- ✓ Communication systems
- ✓ Consumer Electronics
- ✓ Office Automation Devices

# RP110

## COMPACT SINGLE STAGE POWER LINE FILTERS

| MODEL NO.       | RATED CURRENT, A @ 40° C | Y-CAP, nF | LEAKAGE CURRENT, mA<br>@ 250V AC, 50 Hz /<br>@ 120V AC, 60 Hz |      | TERMINAL OPTIONS      |                      |                      | MAX. DIMENSIONS" (MM) |            |            |
|-----------------|--------------------------|-----------|---|------|-----------------------|----------------------|----------------------|-----------------------|------------|------------|
|                 |                          |           |   |      | (QD) INPUT/<br>OUTPUT | (W) INPUT/<br>OUTPUT | (S) INPUT/<br>OUTPUT | WIDTH                 | (LENGTH)   | HEIGHT     |
| RP110-3-0-QD    | 3                        | 0         | -   | -    | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-3-0-W     | 3                        | 0         | -   | -    |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85) | 1.22" (31) |
| RP110-3-47-QD   | 3                        | 0.47      | 0.07  | 0.04 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-3-47-W    | 3                        | 0.47      | 0.07  | 0.04 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85) | 1.22" (31) |
| RP110-3-1-QD    | 3                        | 1         | 0.15  | 0.09 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-3-1-W     | 3                        | 1         | 0.15  | 0.09 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85) | 1.22" (31) |
| RP110-3-2.2-QD  | 3                        | 2.2       | 0.34  | 0.19 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-3-2.2-W   | 3                        | 2.2       | 0.34  | 0.19 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85) | 1.22" (31) |
| RP110-3-4.7-QD  | 3                        | 4.7       | 0.73  | 0.42 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-3-4.7-W   | 3                        | 4.7       | 0.73  | 0.42 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85) | 1.22" (31) |
| RP110-3-10-QD   | 3                        | 10        | 1.57  | 0.90 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-3-10-W    | 3                        | 10        | 1.57  | 0.90 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85) | 1.22" (31) |
| RP110-6-0-QD    | 6                        | 0         | -   | -    | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-6-0-W     | 6                        | 0         | -   | -    |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85) | 1.22" (31) |
| RP110-6-47-QD   | 6                        | 0.47      | 0.07  | 0.04 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-6-47-W    | 6                        | 0.47      | 0.07  | 0.04 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85) | 1.22" (31) |
| RP110-6-1-QD    | 6                        | 1         | 0.15  | 0.09 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-6-1-W     | 6                        | 1         | 0.15  | 0.09 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85) | 1.22" (31) |
| RP110-6-2.2-QD  | 6                        | 2.2       | 0.34  | 0.19 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-6-2.2-W   | 6                        | 2.2       | 0.34  | 0.19 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85) | 1.22" (31) |
| RP110-6-4.7-QD  | 6                        | 4.7       | 0.73  | 0.42 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-6-4.7-W   | 6                        | 4.7       | 0.73  | 0.42 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85) | 1.22" (31) |
| RP110-6-10-QD   | 6                        | 10        | 1.57  | 0.90 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-6-10-W    | 6                        | 10        | 1.57  | 0.90 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85) | 1.22" (31) |
| RP110-6-15-QD   | 6                        | 15        | -   | -    | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-10-0-QD   | 10                       | 0         | -   | -    | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-10-0-W    | 10                       | 0         | -   | -    |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85) | 1.22" (31) |
| RP110-10-47-QD  | 10                       | 0.47      | 0.07  | 0.04 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-10-47-W   | 10                       | 0.47      | 0.07  | 0.04 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85) | 1.22" (31) |
| RP110-10-1-QD   | 10                       | 1         | 0.15  | 0.09 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-10-1-W    | 10                       | 1         | 0.15  | 0.09 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85) | 1.22" (31) |
| RP110-10-2.2-QD | 10                       | 2.2       | 0.34  | 0.19 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |
| RP110-10-2.2-W  | 10                       | 2.2       | 0.34  | 0.19 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85) | 1.22" (31) |
| RP110-10-4.7-QD | 10                       | 4.7       | 0.73  | 0.42 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90) | 1.22" (31) |

**ADDITIONAL MODEL NO. >>**

# RP110

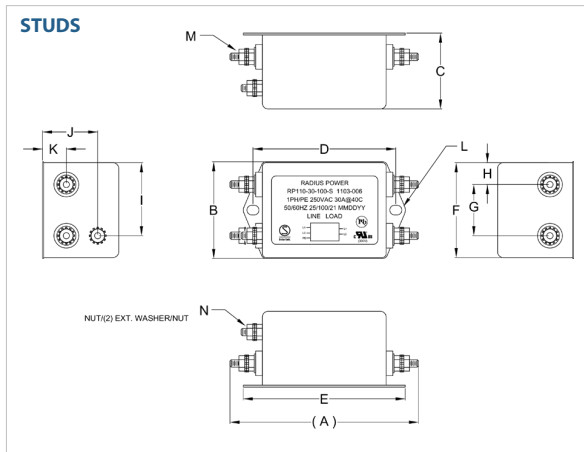
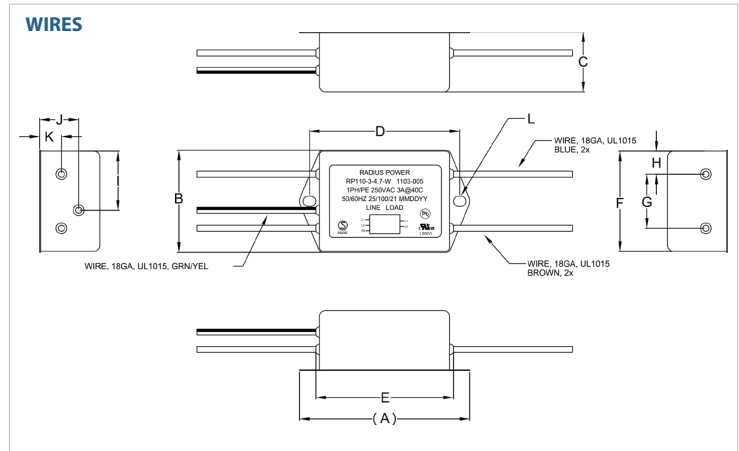
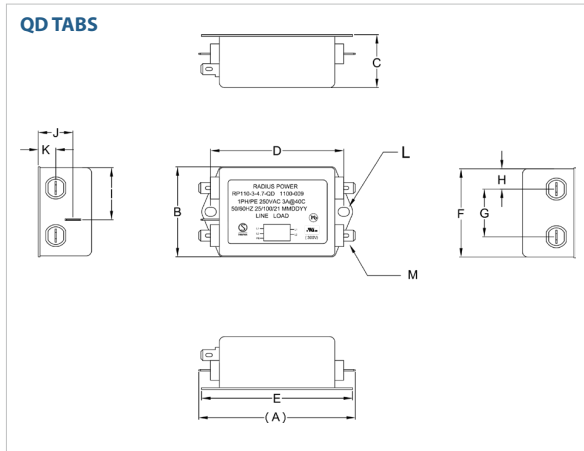
## COMPACT SINGLE STAGE POWER LINE FILTERS

| MODEL NO.       | RATED CURRENT, A @ 40° C | Y-CAP, nF | LEAKAGE CURRENT, mA<br>@ 250V AC, 50 Hz /<br>@ 120V AC, 60 Hz |      | TERMINAL OPTIONS      |                      |                      | MAX. DIMENSIONS" (MM) |             |            |
|-----------------|--------------------------|-----------|---|------|-----------------------|----------------------|----------------------|-----------------------|-------------|------------|
|                 |                          |           |   |      | (QD) INPUT/<br>OUTPUT | (W) INPUT/<br>OUTPUT | (S) INPUT/<br>OUTPUT | WIDTH                 | (LENGTH)    | HEIGHT     |
| RP110-10-4.7-W  | 10                       | 4.7       | 0.73  | 0.42 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85)  | 1.22" (31) |
| RP110-10-10-QD  | 10                       | 10        | 1.57  | 0.90 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90)  | 1.22" (31) |
| RP110-10-10-W   | 10                       | 10        | 1.57  | 0.90 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85)  | 1.22" (31) |
| RP110-20-0-QD   | 20                       | 0         | -   | -    | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90)  | 1.22" (31) |
| RP110-20-0-S    | 20                       | 0         | -   | -    |                       |                      | ✓                    | 2.05" (52)            | 3.94" (100) | 1.61" (41) |
| RP110-20-0-W    | 20                       | 0         | -   | -    |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85)  | 1.22" (31) |
| RP110-20-47-QD  | 20                       | 0.47      | 0.07  | 0.04 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90)  | 1.22" (31) |
| RP110-20-47-S   | 20                       | 0.47      | 0.07  | 0.04 |                       |                      | ✓                    | 2.05" (52)            | 3.94" (100) | 1.61" (41) |
| RP110-20-47-W   | 20                       | 0.47      | 0.07  | 0.04 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85)  | 1.22" (31) |
| RP110-20-1-QD   | 20                       | 1         | 0.15  | 0.09 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90)  | 1.22" (31) |
| RP110-20-1-S    | 20                       | 1         | 0.15  | 0.09 |                       |                      | ✓                    | 2.05" (52)            | 3.94" (100) | 1.61" (41) |
| RP110-20-1-W    | 20                       | 1         | 0.15  | 0.09 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85)  | 1.22" (31) |
| RP110-20-2.2-QD | 20                       | 2.2       | 0.34  | 0.19 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90)  | 1.22" (31) |
| RP110-20-2.2-S  | 20                       | 2.2       | 0.34  | 0.19 |                       |                      | ✓                    | 2.05" (52)            | 3.94" (100) | 1.61" (41) |
| RP110-20-2.2-W  | 20                       | 2.2       | 0.34  | 0.19 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85)  | 1.22" (31) |
| RP110-20-4.7-QD | 20                       | 4.7       | 0.73  | 0.42 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90)  | 1.22" (31) |
| RP110-20-4.7-S  | 20                       | 4.7       | 0.73  | 0.42 |                       |                      | ✓                    | 2.05" (52)            | 3.94" (100) | 1.61" (41) |
| RP110-20-4.7-W  | 20                       | 4.7       | 0.73  | 0.42 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85)  | 1.22" (31) |
| RP110-20-10-QD  | 20                       | 10        | 1.57  | 0.90 | ✓                     |                      |                      | 2.05" (52)            | 3.54" (90)  | 1.22" (31) |
| RP110-20-10-S   | 20                       | 10        | 1.57  | 0.90 |                       |                      | ✓                    | 2.05" (52)            | 3.94" (100) | 1.61" (41) |
| RP110-20-10-W   | 20                       | 10        | 1.57  | 0.90 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85)  | 1.22" (31) |
| RP110-30-0-S    | 30                       | 0         | -   | -    |                       |                      | ✓                    | 2.05" (52)            | 3.94" (100) | 1.61" (41) |
| RP110-30-0-W    | 30                       | 0         | -   | -    |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85)  | 1.22" (31) |
| RP110-30-47-S   | 30                       | 0.47      | 0.07  | 0.04 |                       |                      | ✓                    | 2.05" (52)            | 3.94" (100) | 1.61" (41) |
| RP110-30-47-W   | 30                       | 0.47      | 0.07  | 0.04 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85)  | 1.22" (31) |
| RP110-30-1-S    | 30                       | 1         | 0.15  | 0.09 |                       |                      | ✓                    | 2.05" (52)            | 3.94" (100) | 1.61" (41) |
| RP110-30-1-W    | 30                       | 1         | 0.15  | 0.09 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85)  | 1.22" (31) |
| RP110-30-2.2-S  | 30                       | 2.2       | 0.34  | 0.19 |                       |                      | ✓                    | 2.05" (52)            | 3.94" (100) | 1.61" (41) |
| RP110-30-2.2-W  | 30                       | 2.2       | 0.34  | 0.19 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85)  | 1.22" (31) |
| RP110-30-4.7-S  | 30                       | 4.7       | 0.73  | 0.42 |                       |                      | ✓                    | 2.05" (52)            | 3.94" (100) | 1.61" (41) |
| RP110-30-4.7-W  | 30                       | 4.7       | 0.73  | 0.42 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85)  | 1.22" (31) |
| RP110-30-10-S   | 30                       | 10        | 1.57  | 0.90 |                       |                      | ✓                    | 2.05" (52)            | 3.94" (100) | 1.61" (41) |
| RP110-30-10-W   | 30                       | 10        | 1.57  | 0.90 |                       | ✓                    |                      | 2.05" (52)            | 3.35" (85)  | 1.22" (31) |

# RP110

## COMPACT SINGLE STAGE POWER LINE FILTERS

### RP110 MECHANICAL OUTLINES” (MM)



| SERIES         | (A)            | B             | C             | D             | E               | F             | G             | H               | I               | J               | K               | L                                | M                  | N                |
|----------------|----------------|---------------|---------------|---------------|-----------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|----------------------------------|--------------------|------------------|
| <b>QD TABS</b> | 3.54"<br>(90)  | 2.05"<br>(52) | 1.22"<br>(31) | 2.95"<br>(75) | 3.35"<br>(85)   | 2.01"<br>(51) | 1.06"<br>(27) | 0.45"<br>(11.5) | 1.20"<br>(30.5) | 0.77"<br>(19.5) | 0.39"<br>(9.9)  | Ø 0.25"x5.1, 2x<br>Ø 6.4x5.1, 2x | QD, MALE, 6.35, 5x | N/A              |
| <b>WIRES</b>   | 3.35"<br>(85)  | 2.05"<br>(52) | 1.22"<br>(31) | 2.95"<br>(75) | 2.70"<br>(68.5) | 2.01"<br>(51) | 1.06"<br>(27) | 0.45"<br>(11.5) | 1.20"<br>(30.5) | 0.77"<br>(19.5) | 0.43"<br>(10.9) | Ø 0.25"x5.1, 2x<br>Ø 6.4x5.1, 2x | N/A                | N/A              |
| <b>STUDS</b>   | 3.94"<br>(100) | 2.05"<br>(52) | 1.61"<br>(41) | 2.95"<br>(75) | 3.35"<br>(85)   | 2.01"<br>(51) | 1.06"<br>(27) | 0.45"<br>(11.5) | 1.56"<br>(39.5) | 1.14"<br>(29)   | 0.49"<br>(12.5) | Ø 0.25"x5.1, 2x<br>Ø 6.4x5.1, 2x | STUD, M4, 4x       | STUD,<br>GND, M4 |

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

# RP110

## COMPACT SINGLE STAGE POWER LINE FILTERS

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

| Amps | Freq (MHz) | 0.15 | 0.5 | 1.0 | 10 | 30 |
|------|------------|------|-----|-----|----|----|
| 3    | CM (dB)    | 48   | 45  | 40  | 40 | 40 |
|      | DM (dB)    | 30   | 48  | 60  | 55 | 55 |
| 6    | CM (dB)    | 40   | 40  | 40  | 40 | 40 |
|      | DM (dB)    | 28   | 40  | 50  | 70 | 60 |
| 10   | CM (dB)    | 28   | 40  | 44  | 44 | 34 |
|      | DM (dB)    | 28   | 40  | 54  | 70 | 66 |
| 20   | CM (dB)    | 15   | 24  | 30  | 54 | 54 |
|      | DM (dB)    | 28   | 38  | 50  | 54 | 70 |
| 30   | CM (dB)    | 13   | 22  | 30  | 52 | 50 |
|      | DM (dB)    | 20   | 32  | 50  | 55 | 60 |