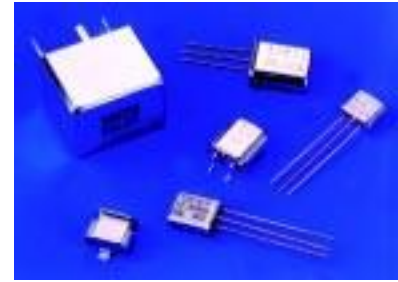


● FEATURES

- STABLE TEMPERATURE CHARACTERISTICS
- CUSTOM SPECIFICATIONS AVAILABLE

● SPECIFICATIONS

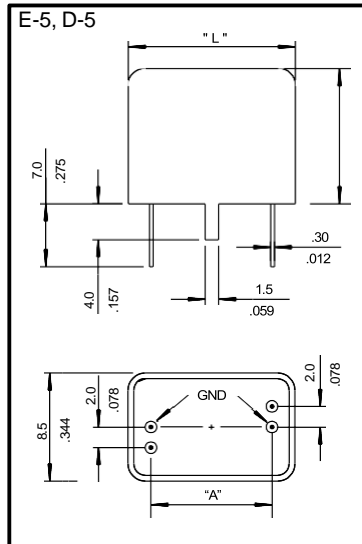
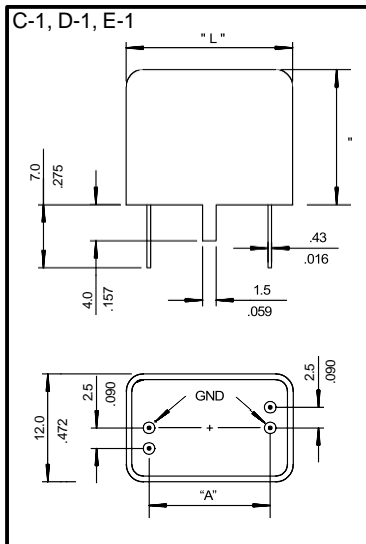
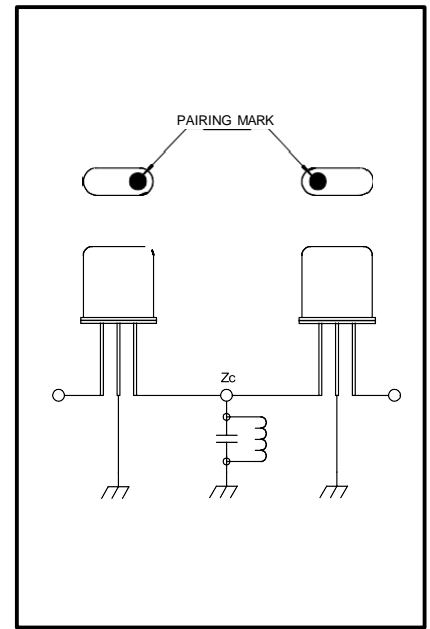
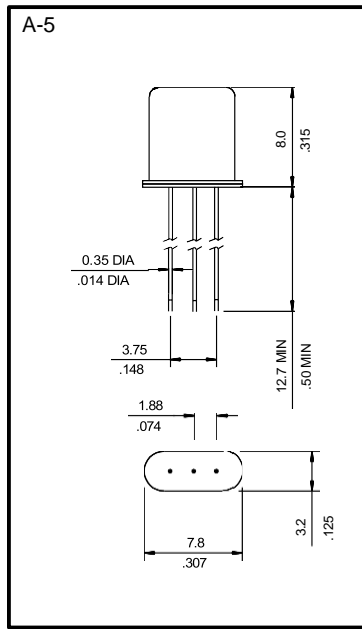
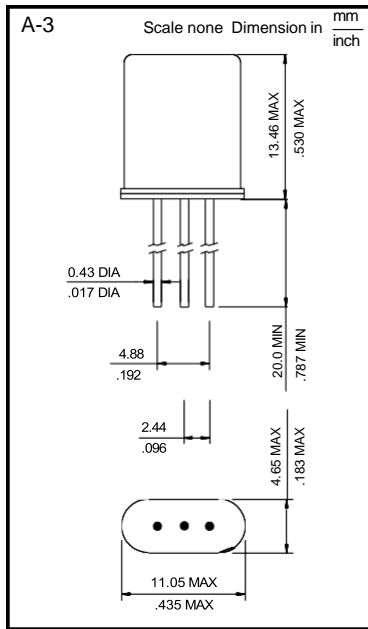
| CHANNEL SPACING | MODEL | CENTER FREQUENCY kHz | PASS BANDWIDTH | | RIPPLE dBm MAX | INSERTION LOSS dB MAX | STOP BANDWIDTH | | TERMINATING IMPEDANCE k // pF | CASE STYLE | POLES |
|-----------------|--------|----------------------|----------------|----|----------------|-----------------------|----------------|----|-------------------------------|------------|-------|
| | | | kHz MIN | dB | | | kHz MAX | dB | | | |
| 12.5 kHz | 10M7A | 10700 | ±3.50 | 3 | 0.5 | 1.5 | ±12.5 | 18 | 1.2//5 | A-3 | 2 |
| | 10M7B | 10700 | ±3.50 | 3 | 1 | 2.5 | ±12.5 | 40 | 1.2//3 | A-3x2 | 4 |
| | 10M8C | 10700 | ±3.75 | 3 | 2 | 3.5 | ±12.5 | 65 | 1.6//4 | C-1 | 6 |
| | 10M8D | 10700 | ±3.75 | 3 | 2 | 4 | ±12.5 | 90 | 1.6//4 | D-1 | 8 |
| | 10M8E | 10700 | ±3.75 | 3 | 2 | 5 | ±10.5 | 90 | 1.6//4 | E-1 | 10 |
| | 10H8D | 10700 | ±3.75 | 3 | 2 | 4 | ±12.5 | 90 | 0.91//25 | FK-51 | 8 |
| | 10T8D | 10700 | ±3.75 | 3 | 2 | 4 | ±12.5 | 90 | 0.91//15 | FK-50 | 8 |
| | 21H8D | 21400 | ±3.75 | 3 | 2 | 4 | ±12.5 | 90 | 0.91//25 | FK-51 | 8 |
| | 21T8D | 21400 | ±3.75 | 3 | 2 | 4 | ±12.5 | 90 | 0.91//25 | FK-50 | 8 |
| | 21U8A | 21400 | ±3.75 | 3 | 0.5 | 1.5 | ±18.0 | 20 | 0.85//6 | A-5 | 2 |
| | 21U8B | 21400 | ±3.75 | 3 | 1 | 2.5 | ±14.0 | 40 | 0.85//4 | A-5x2 | 4 |
| | 21U8C | 21400 | ±3.75 | 3 | 2 | 3 | ±12.5 | 65 | 0.85//4 | D-5 | 6 |
| | 21U8D | 21400 | ±3.75 | 3 | 2 | 4 | ±12.5 | 90 | 0.85//4 | D-5 | 6 |
| | 21U8E | 21400 | ±3.75 | 3 | 2 | 5 | ±10.0 | 90 | 0.85//4 | E-5 | 10 |
| 20.0 kHz | 10M12C | 10700 | ±6.0 | 3 | 2 | 3 | ±20.0 | 65 | 3.0//1.5 | C-1 | 6 |
| | 10M12D | 10700 | ±6.0 | 3 | 2 | 3.5 | ±20.0 | 90 | 3.0//1.5 | D-1 | 8 |
| | 10H12D | 10700 | ±6.0 | 3 | 2 | 4 | ±20.0 | 90 | 0.91//25 | FK-51 | 8 |
| | 10T12D | 10700 | ±6.0 | 3 | 2 | 4 | ±20.0 | 90 | 0.91//25 | FK-50 | 8 |
| | 21H12D | 21400 | ±6.0 | 3 | 2 | 4 | ±20.0 | 90 | 0.91//25 | FK-51 | 8 |
| | 21T12D | 21400 | ±6.0 | 3 | 2 | 4 | ±20.0 | 90 | 0.91//25 | FK-50 | 8 |
| | 21U12A | 21400 | ±6.0 | 3 | 0.5 | 1.5 | ±25.0 | 20 | 1.2//3 | A-5 | 2 |
| | 21U12B | 21400 | ±6.0 | 3 | 1 | 2 | ±20.0 | 40 | 1.2//2 | A-5x2 | 4 |
| | 21U12C | 21400 | ±6.0 | 3 | 2 | 2.5 | ±20.0 | 65 | 1.2//2 | D-5 | 6 |
| | 21U12D | 21400 | ±6.0 | 3 | 2 | 3 | ±20.0 | 90 | 1.2//2 | D-5 | 6 |
| | 21U12E | 21400 | ±6.0 | 3 | 2 | 4 | ±16.0 | 90 | 1.2//2 | E-5 | 10 |



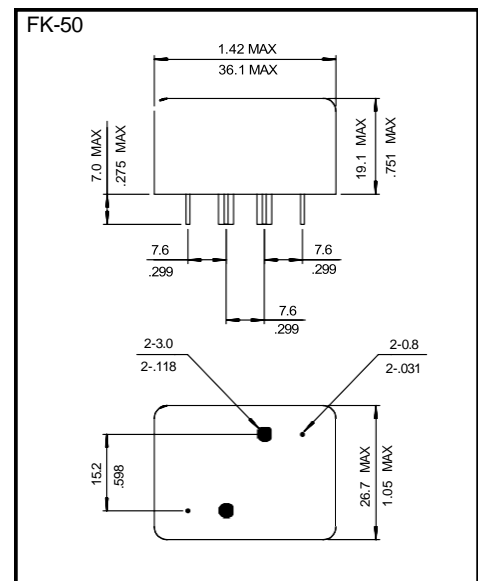
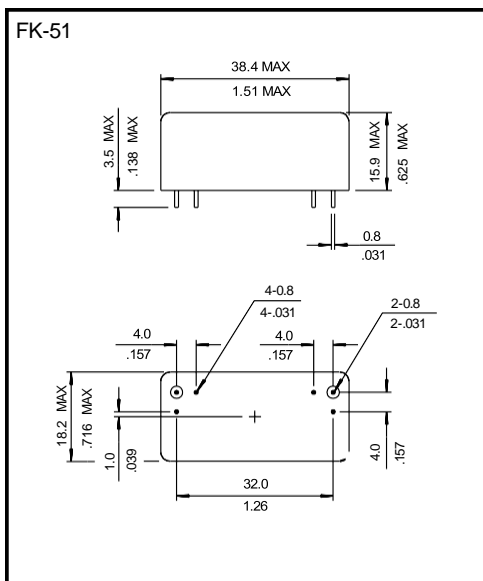
| CHANNEL SPACING | MODEL | CENTER FREQUENCY kHz | PASS BANDWIDTH | | RIPPLE dBm MAX | INSERTION LOSS dB MAX | STOP BANDWIDTH | | TERMINATING IMPEDANCE k // pF | CASE STYLE | POLES |
|-----------------|--------|----------------------|----------------|----|----------------|-----------------------|----------------|----|-------------------------------|------------|-------|
| | | | kHz MIN | dB | | | kHz MAX | dB | | | |
| 25 | 10M15A | 10700 | ±7.5 | 3 | 0.5 | 1.5 | ±25 | 18 | 3.0//2 | A-3 | 2 |
| | 10M15B | 10700 | ±7.5 | 3 | 1 | 2 | ±25 | 40 | 3.0//2 | A-3x2 | 4 |
| | 10M15C | 10700 | ±7.5 | 3 | 2 | 2.5 | ±25 | 65 | 3.0//2 | C-1 | 6 |
| | 10M15D | 10700 | ±7.5 | 3 | 2 | 3.5 | ±20 | 80 | 3.0//2 | D-1 | 8 |
| | 10M15E | 10700 | ±7.5 | 3 | 2 | 4 | ±17.5 | 90 | 3.0//2 | E-1 | 10 |
| | 10H15D | 10700 | ±7.5 | 3 | 2 | 4 | ±25 | 90 | 0.91//25 | FK-51 | 8 |
| | 10T15D | 10700 | ±7.5 | 3 | 2 | 4 | ±25 | 90 | 0.91//25 | FK-50 | 8 |
| | 21H15D | 21400 | ±7.5 | 3 | 2 | 4 | ±25 | 90 | 0.91//25 | FK-51 | 8 |
| | 21T15D | 21400 | ±7.5 | 3 | 2 | 4 | ±25 | 90 | 0.91//25 | FK-50 | 8 |
| | 21U15A | 21400 | ±7.5 | 3 | 0.5 | 1.5 | ±25 | 18 | 1.6//3 | A-5 | 2 |
| | 21U15B | 21400 | ±7.5 | 3 | 1 | 2 | ±25 | 40 | 1.6//2 | A-5x2 | 4 |
| | 21U15C | 21400 | ±7.5 | 6 | 2 | 2.5 | ±25 | 65 | 1.6//2 | D-5 | 6 |
| | 21U15D | 21400 | ±7.5 | 6 | 2 | 3.5 | ±25 | 90 | 1.6//2 | D-5 | 8 |
| | 21U15E | 21400 | ±7.5 | 6 | 2 | 4 | ±18 | 90 | 1.6//2 | E-5 | 10 |
| 20.0 | 10M30A | 10700 | ±15.0 | 3 | 0.5 | 1.5 | ±50.0 | 18 | 5 | A-3 | 2 |
| | 10M30B | 10700 | ±15.0 | 3 | 1 | 1.5 | ±50.0 | 40 | 5.5//1 | A-3x2 | 4 |
| | 10M30C | 10700 | ±15.0 | 6 | 2 | 2.5 | ±45.0 | 60 | 5.5//1 | C-1 | 6 |
| | 10M30D | 10700 | ±15.0 | 6 | 2 | 3.5 | ±40.0 | 80 | 5.5//1 | D-1 | 8 |
| | 21U30A | 21400 | ±15.0 | 3 | 0.5 | 1.5 | ±45.0 | 15 | 1.5//1.5 | A-5 | 2 |
| | 21U30B | 21400 | ±15.0 | 3 | 1 | 2 | ±50.0 | 40 | 2.0//0.5 | A-5x2 | 4 |
| | 21U30C | 21400 | ±15.0 | 3 | 2 | 2.5 | ±50.0 | 65 | 2.3//0.5 | D-5 | 6 |
| | 21U30D | 21400 | ±15.0 | 3 | 2 | 3 | ±50.0 | 80 | 2.3//0.5 | D-5 | 6 |
| | 10H30D | 10700 | ±15.0 | 3 | 2 | 4 | ±50.0 | 80 | 0.91//25 | FK-51 | 8 |
| | 10T30D | 10700 | ±15.0 | 3 | 2 | 4 | ±50.0 | 80 | 0.91//25 | FK-50 | 8 |
| | 21H30D | 21400 | ±15.0 | 3 | 2 | 4 | ±50.0 | 80 | 0.91//25 | FK-51 | 8 |
| | 21T30D | 21400 | ±15.0 | 3 | 2 | 4 | ±50.0 | 80 | 0.91//25 | FK-50 | 8 |

OUTLINE DRAWINGS ARE ON THE FOLLOWING PAGE

● OUTLINE DRAWINGS



| CASE | C-1 | D-1 | E-1 | D-5 | E-5 |
|------|----------------------|----------------------|----------------------|----------------------|----------------------|
| A | 9.0 mm 0.354 inch | 13.4mm .530 inch | 17.8 mm .700 inch | 7.4 mm .290 inch | 9.8 mm .385 inch |
| L | 15.0 mm .590 inch | 18.5mm .730 inch | 23.0 mm .905 inch | 11.0 mm .433 inch | 13.4 mm .530 inch |
| H | 15.0 mm .590 inch | 15.0 mm .590 inch | 15.0 mm .590 inch | 11.0 mm .433 inch | 11.0 mm .433 inch |



● SPECIFICATIONS

| MODEL | CENTER FREQUENCY MHz | PASS BANDWIDTH | | RIPPLE | INSERTION LOSS | STOP BANDWIDTH | | TERMINATING IMPEDANCE | CASE STYLE | POLES |
|-------|----------------------|----------------|----|---------|----------------|----------------|----|-----------------------|------------|-------|
| | | kHz MIN | dB | dBm MAX | dB MAX | kHz MAX | dB | k // pF | | |

● FUNDAMENTAL

| | | | | | | | | | | |
|---------|-------|-------|---|---|---|-------|----|-----------|-------|---|
| 45M15AF | 45.00 | ±7.50 | 3 | 1 | 2 | ±25.0 | 15 | 0.65//4.5 | A-5 | 2 |
| 45M15BF | 45.00 | ±7.50 | 3 | 1 | 3 | ±25.0 | 30 | 0.65//1.5 | A-5X2 | 4 |
| 45M20AF | 45.00 | ±10.0 | 3 | 1 | 2 | ±34.0 | 15 | 0.70//2.5 | A-5 | 2 |
| 45M20BF | 45.00 | ±10.0 | 3 | 1 | 3 | ±48.0 | 40 | 0.70//1.5 | A-5X2 | 4 |
| 45M30AF | 45.00 | ±15.0 | 3 | 1 | 2 | ±50.0 | 15 | 0.80//1.5 | A-5 | 2 |
| 45M30BF | 45.00 | ±15.0 | 3 | 1 | 3 | ±60.0 | 40 | 0.80//1.0 | A-5X2 | 4 |

● THIRD OVERTONE

| | | | | | | | | | | |
|--------|-------|-------|---|-----|---|-------|----|----------|-------|---|
| 45M15A | 45.00 | ±7.50 | 3 | 0.5 | 2 | ±30.0 | 15 | 3.0//1.0 | A-5 | 2 |
| 45M15B | 45.00 | ±7.50 | 3 | 1 | 3 | ±25.0 | 25 | 4.0//1.0 | A-5X2 | 4 |
| 45M20A | 45.00 | ±10.0 | 3 | 1 | 2 | ±30.0 | 15 | 5.0//1.5 | A-5 | 2 |
| 45M20B | 45.00 | ±10.0 | 3 | 1.5 | 3 | ±40.0 | 35 | 5.0//1.5 | A-5X2 | 4 |

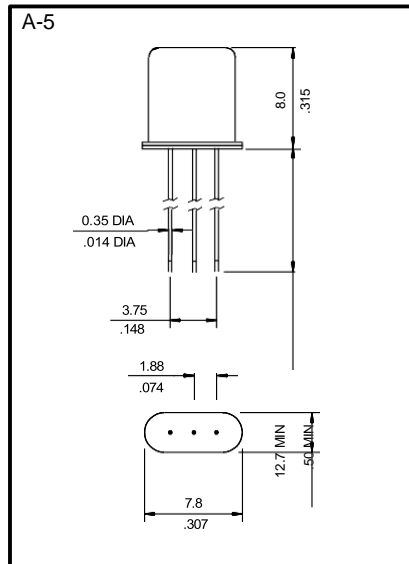
| | | | | | | | | | | |
|--------|--------|-------|---|-----|---|-------|----|----------|-------|---|
| 55M12B | 55.025 | ±6.0 | 3 | 1.5 | 4 | ±30.0 | 15 | 3.0//1.0 | A-5X2 | 4 |
| 55M20B | 55.025 | ±10.0 | 3 | 1.5 | 3 | ±25.0 | 25 | 5.0//1.0 | A-5X2 | 4 |

| | | | | | | | | | | |
|--------|--------|-------|---|-----|-----|-------|----|----------|-------|---|
| 58M15B | 58.125 | ±7.5 | 3 | 2 | 6 | ±40.0 | 40 | 3.0//1.0 | A-5X2 | 4 |
| 58M20B | 58.125 | ±10.0 | 3 | 1.5 | 4.5 | ±50.0 | 25 | 5.0//1.0 | A-5X2 | 4 |

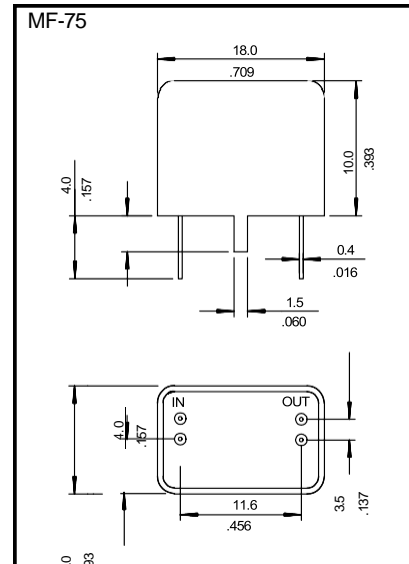
| | | | | | | | | | | |
|--------|-------|-------|---|-----|---|-------|----|----------|-------|---|
| 70M15A | 70.00 | ±7.50 | 3 | 1 | 2 | ±30.0 | 15 | 2.5//1.0 | A-5 | 2 |
| 70M15B | 70.00 | ±7.50 | 3 | 2 | 4 | ±40.0 | 40 | 2.5//1.0 | A-5X2 | 4 |
| 70M20A | 70.00 | ±10.0 | 3 | 1 | 2 | ±40.0 | 15 | 2.5//1.0 | A-5 | 2 |
| 70M20B | 70.00 | ±10.0 | 3 | 1.5 | 3 | ±50.0 | 35 | 2.5//1.0 | A-5X2 | 4 |

| | | | | | | | | | | |
|---------|-----|-------|---|-----|--|-------|----|---------|-------|---|
| 80M30B | 80 | ±15.0 | 3 | 1.5 | | ±60.0 | 25 | 50 OHMS | MF-75 | 4 |
| 90M30B | 90 | ±15.0 | 3 | 1.5 | | ±60.0 | 25 | 50 OHMS | MF-75 | 4 |
| 100M30B | 100 | ±15.0 | 3 | 1.5 | | ±60.0 | 25 | 50 OHMS | MF-75 | 4 |

● OUTLINE DRAWINGS



3.2
.125



4.6
.181

Raltron Electronics/RAMI Technology USA, LLC, including its affiliates, employees, agents and other persons acting on its behalf (collectively Raltron/RAMI Tech), disclaim any and all liability for any errors or inaccuracies contained in this data sheet. While Raltron/RAMI Tech has made every reasonable effort to ensure the accuracy of all product information, specifications and data contained herein, Raltron/RAMI Tech does not guarantee that the information is accurate, reliable or current. The product information is provided for reference purposes only and is subject to change, correction or revision, at any time without notice. Raltron/RAMI Tech does not assume any liability arising out of an application or use of any product described herein and disclaims any warranties expressed or implied. The user of products in such applications shall assume all risks of such use and will agree to hold Raltron/RAMI Tech, harmless against all damages.

Raltron Electronics Corporation 10400 NW 33rd St. Miami, Florida 33172 U.S.A.

Tel: 305-593-6033 Fax: 305-594-3973 e-mail: sales@raltron.com Internet: http://www.raltron.com