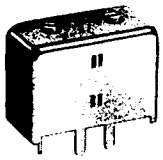
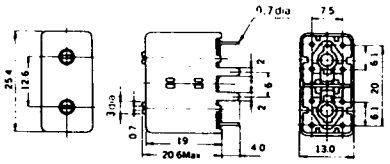
# TYPE CBW CBT

## Helical Filters

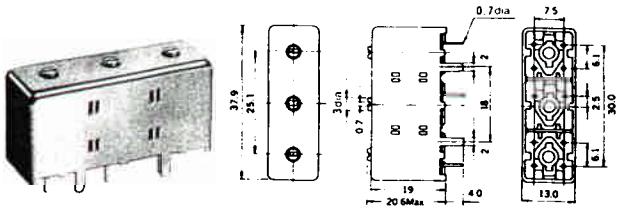
TOKO
TOKO AMERICA, INC.

**CBW Double Tuned**
**CBT Triple Tuned**
***Frequency Range:*** 100MHz-240MHz





*Top Tuned*
*Tuning Tool: Standard*
*(−) Blade*
*(0.5x2.6)*



## *Quality Features:*

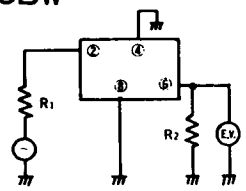
- Good performance to size ratio.
- Superior resistance to shock, vibration, temperature and humidity variations.
- Ideal for the VHF band, such as CATV, where low insertion and very high selectivity are important.
- Nickel plated copper shield reduces insertion loss and improves selectivity.
- Brass tuning slug for distributed capacitance adjustment is a block form precisely fitted to a threaded adjustment screw for very fine adjustment. A spring between the block and top of the shield provides additional pressure to maintain setting and a constant grounding path.
- Coil form dimensions are precisely controlled through the use of high quality molds during fabrication to assure consistent spacing between grooves and a constant winding pitch. This produces superior consistency in the winding of the coil, which in turn gives more stable electrical characteristics.
- Dividing plate between coil forms is soldered to maintain consistent reference point (window) between resonators for precise coupling.
- Coil bobbin and base are formed from a specially compounded material, which promotes low insertion loss and produces outstanding stability during changes in temperture and humidity.
- Terminals feature rounded ends to facilitate PCB insertion and pre-soldered for a reliable PCB connection.
- Grounding tabs on cavity simplify grounding and improve stability.

## EXAMPLES OF ELECTRICAL CHARACTERISTICS

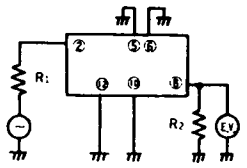
| Item \ Type | | CBW | CBT |
|---|---|---|---|
| Center Frequency | | 145MHz | 145MHz |
| Bandwidth, at 1dB | | 3MHz | 3MHz |
| Attenuation | fo + 10MHz | 20dB | 28dB |
| | fo − 10MHz | 22dB | 35dB |
| Ripple | | 0.3dB | 0.5dB |
| Insertion Loss | | 1.3dB | 2dB |
| Impedance | | 50Ω | 50Ω |

## TEST CIRCUITS (BOTTOM VIEW)

**CBW**

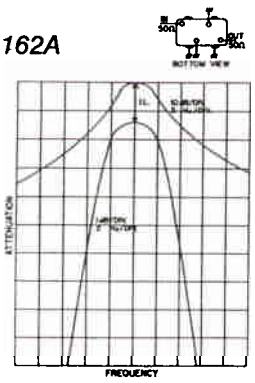



**CBT**

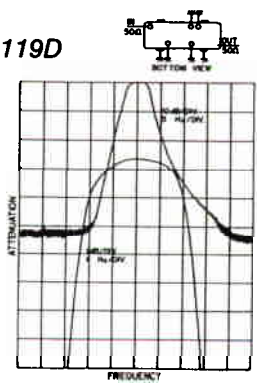



Notes: 1. Case lugs must be grounded

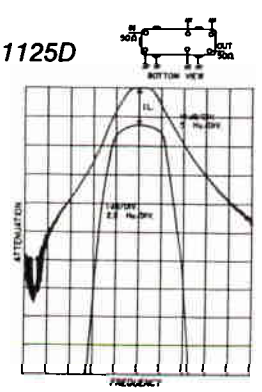
*CBW*
*271MT-1162A*




*CBT*
*272MT-1119D*




*CBT*
*272MT-1125D*

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## STANDARD DEVICES SELECTION GUIDE

The Part Numbers shown in the table below are standard devices, which are readily available. TOKO will design and manufacture modified and custom devices with specific characteristics to meet your requirements. If you do not find the device for your application in this catalog, please see Modified and Custom Request Form located in the rear of this catalog.

### TYPE CBW

| TOKO Part Number | Center Frequency (MHz) | Bandwidth @ −1dB (MHz) min. | Selectivity Fo−15MHz (dB) min. | Selectivity Fo+15MHz (dB) min. | Ripple (dB) max. | Insertion Loss (dB) max. | Tuning Range (MHz) | |
|---|---|---|---|---|---|---|---|---|
| 271MT-1149A | 99 | 3.0 min. | 28 | 18 | 1.0 | 3.5 | 97 | 101 |
| 271MT-1150A | 103 | 3.0 | 29 | 18 | 1.0 | 2.5 | 101 | 105 |
| 271MT-1151A | 107.5 | 3.0 | 30 | 18 | 0.5 | 2.5 | 105 | 109 |
| 271MT-1152A | 111 | 3.0 | 28 | 18 | 0.5 | 2.5 | 109 | 113 |
| 271MT-1153A | 115 | 2.0 | 32 | 20 | 0.5 | 2.5 | 113 | 117 |
| 271MT-1154A | 119 | 2.5 | 29 | 21 | 0.5 | 2.5 | 117 | 121 |
| 271MT-1155A | 122 | 2.0 | 27 | 25 | 0.5 | 2.5 | 119 | 125 |
| 271MT-1156A | 126 | 3.0 | 24 | 23 | 0.5 | 2.5 | 123 | 129 |
| 271MT-1157A | 131 | 3.0 | 23 | 23 | 0.5 | 2.5 | 127 | 135 |
| 271MT-1158A | 138 | 2.0 | 27 | 24 | 0.5 | 3.0 | 133 | 143 |
| 271MT-1159A | 146 | 2.5 | 27 | 22 | 0.5 | 3.0 | 141 | 151 |
| 271MT-1160A | 154 | 2.5 | 23 | 20 | 0.5 | 2.5 | 149 | 159 |
| 271MT-1161A | 164 | 2.5 | 27 | 24 | 0.5 | 3.0 | 157 | 167 |
| 271MT-1162A | 171 | 2.5 | 18 | 16 | 0.5 | 2.5 | 165 | 177 |
| 271MT-1163A | 182.5 | 3.0 | 23 | 20 | 0.5 | 3.0 | 175 | 190 |
| 271MT-1164A | 194.5 | 2.5 | 26 | 22 | 0.5 | 3.5 | 187 | 202 |
| 271MT-1165A | 207.5 | 2.5 | 25 | 23 | 0.5 | 3.5 | 200 | 215 |
| 271MT-1166A | 220 | 2.0 | 17 | 16 | 0.5 | 3.0 | 210 | 230 |
| 271MT-1134A | 138 | 2.2 | 20(−10MHz) | 18(+10MHz) | 1.0 | 2.5 | 134 | 142 |
| 271MT-1136A | 167 | 2.4 | 19(−10MHz) | 17(+10MHz) | 1.0 | 2.5 | 162 | 171 |
| 271MT-1142A | 176 | 2.6 | 16(−10MHz) | 15(+10MHz) | 1.0 | 2.5 | 170 | 182 |
| 271MT-1143A | 187 | 2.8 | 15(−10MHz) | 14(+10MHz) | 1.0 | 2.5 | 180 | 195 |
| 271MT-1145A | 216 | 3.0 | 15(−10MHz) | 14(+10MHz) | 1.0 | 3.0 | 207 | 225 |

### TYPE CBT

| TOKO Part Number | Center Frequency (MHz) | Bandwidth (MHz) Min. | Selectivity Fo−( )MHz (dB) min. | Selectivity Fo+( )MHz (dB) min. | Ripple (dB) max. | Insertion Loss (dB) max. |
|---|---|---|---|---|---|---|
| 272MT-1173A | 100 | 4.0(BW3) | 30(−15) | 30(+15) | 1.0 | 4.0 |
| 272MT-1230D | 107 | 4.0(BW3) | 44(−10) | 26(+15) | 1.0 | 4.5 |
| 272MT-1180A | 110 | 3.0(BW3) | 37(−10) | 30(+10) | 1.0 | 5.5 |
| 272MT-1177D | 124 | 3.5(BW3) | 21(− 6) | 17(+ 6) | 1.0 | 3.5 |
| 272MT-1175D | 130 | 3.0(BW3) | 21(− 5) | 18(+ 5) | 1.0 | 5.5 |
| 272MT-1176A | 133.7 | 3.5(BW3) | 23(− 6) | 18(+ 6) | 1.0 | 3.5 |
| 272MT-1224L | 134 | 5.0(BW3) | 30(−10) | 22(+10) | 1.0 | 3.5 |
| 272MT-1116A | 134 | 5.0(BW1) | 24(−15) | 24(+15) | 1.0 | 3.0 |
| 272MT-1169D | 137.5 | 2.0(BW1) | 35(−10) | 30(+10) | 1.0 | 4.5 |
| 272MT-1113D | 140.21 | 6.0(BW6) | 25(−10) | 21(+10) | 1.0 | 5.0 |
| 272MT-1117D | 140.21 | 3.7(BW1) | 26(−10) | 25(+10) | 1.0 | 3.0 |
| 272MT-1119D | 143 | 3.0(BW1) | 35(−10) | 22(+10) | 1.0 | 4.0 |
| 272MT-1114A | 143 | 6.0(BW1) | 15(−10) | 12(+10) | 1.0 | 2.5 |
| 272MT-1181D | 147 | 4.0(BW3) | 20(− 6) | 15(+ 6) | 1.0 | 3.5 |
| 272MT-1222A | 154 | 2.0(BW1) | 20(− 5) | 15(+ 5) | 1.0 | 3.0 |
| 272MT-1219A | 156.7 | 1.5(BW3) | 40(− 6) | 25(+ 6) | 1.0 | 7.0 |
| 272MT-1124D | 157 | 3.5(BW3) | 17(− 6) | 13(+ 6) | 1.0 | 3.5 |
| 272MT-1174A | 159 | 7.0(BW3) | 35(−20) | 33(+20) | 1.0 | 3.0 |
| 272MT-1123A | 160 | 1.5(BW1) | 45(−15) | 45(+15) | 1.0 | 6.0 |
| 272MT-1221A | 161 | 2.2(BW1) | 32(−10) | 40(+10) | 1.0 | 4.5 |
| 272MT-1218A | 161.3 | 1.5(BW3) | 40(− 6) | 25(+ 6) | 1.0 | 6.0 |
| 272MT-1148A | 164 | 0.8(BW1) | 35(− 5) | 29(+ 5) | 1.0 | 8.5 |

*continued on next page*

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

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**Телефон:** +7 812 627 14 35

**Электронная почта:** sales@st-electron.ru

**Адрес:** 198099, Санкт-Петербург, Промышленная ул, дом № 19, литера Н, помещение 100-Н Офис 331