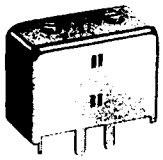
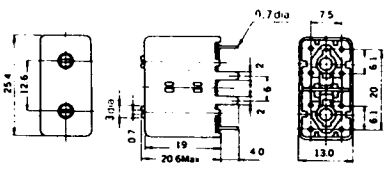
TYPE CBW CBT

Helical Filters

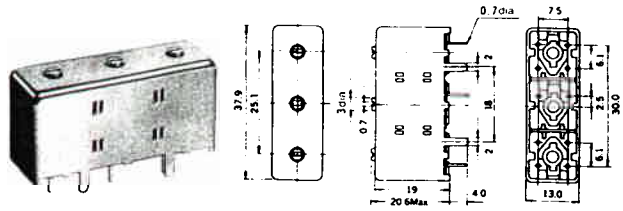
TOKO AMERICA, INC.

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





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



Quality Features:

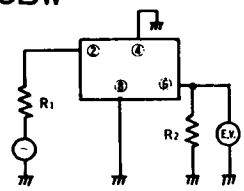
- Good performance to size ratio.
- Superior resistance to shock, vibration, temperature and humidity variations.
- Ideal for the VHF band, such as CATV, where low insertion and very high selectivity are important.
- Nickel plated copper shield reduces insertion loss and improves selectivity.
- Brass 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

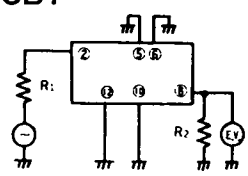
Item \ Type		CBW	CBT
Center Frequency		145MHz	145MHz
Bandwidth, at 1dB		3MHz	3MHz
Attenuation	fo + 10MHz	20dB	28dB
	fo − 10MHz	22dB	35dB
Ripple		0.3dB	0.5dB
Insertion Loss		1.3dB	2dB
Impedance		50Ω	50Ω

TEST CIRCUITS (BOTTOM VIEW)

CBW

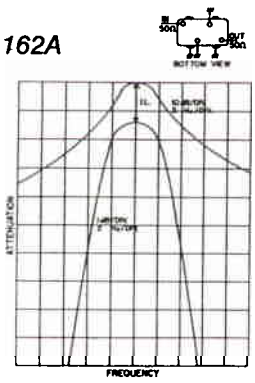


CBT

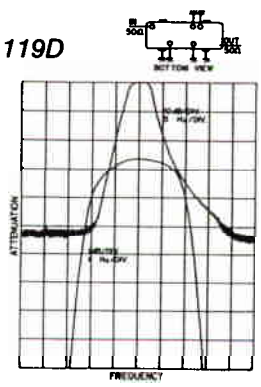


Notes: 1. Case lugs must be grounded

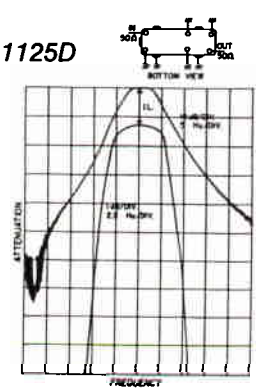
CBW
271MT-1162A



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

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