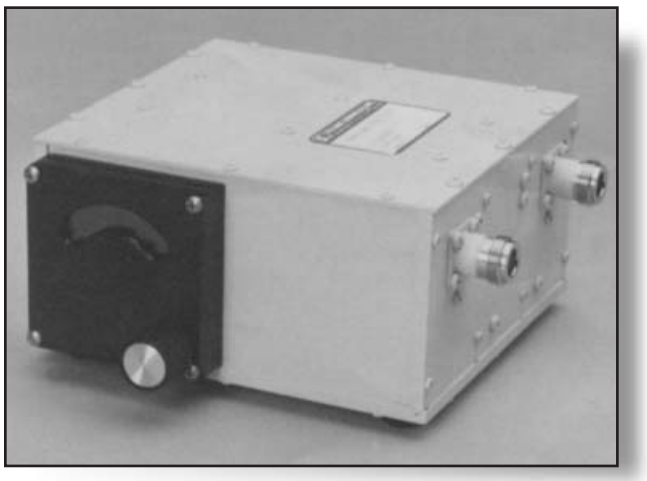
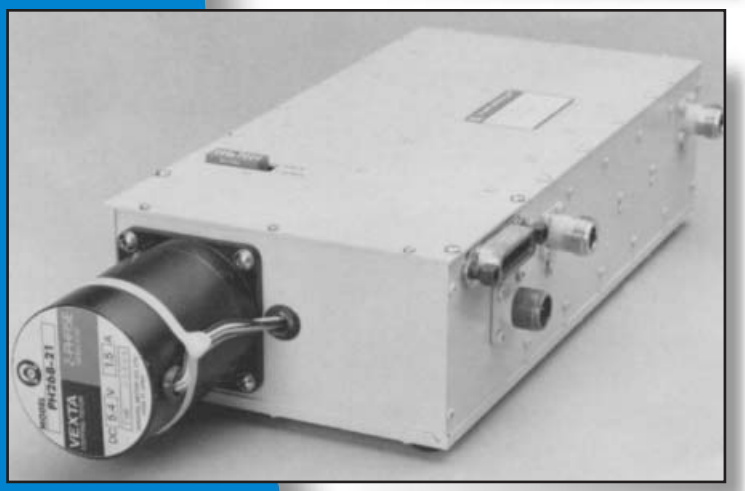
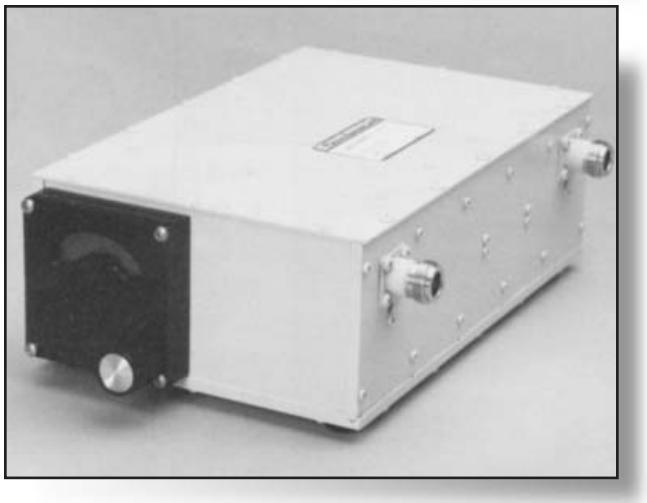
TELONIC TUNABLE FILTERS

TTF – Manually Tuned Bandpass Filters
TTR – Manually Tuned Bandstop Filters
TCD – Buss Tuned Bandpass Filters
TCS – Multi-Octave Buss Tuned Filters







TELONIC/BERKELEY

TABLE OF CONTENTS

Manually Tuned Filters

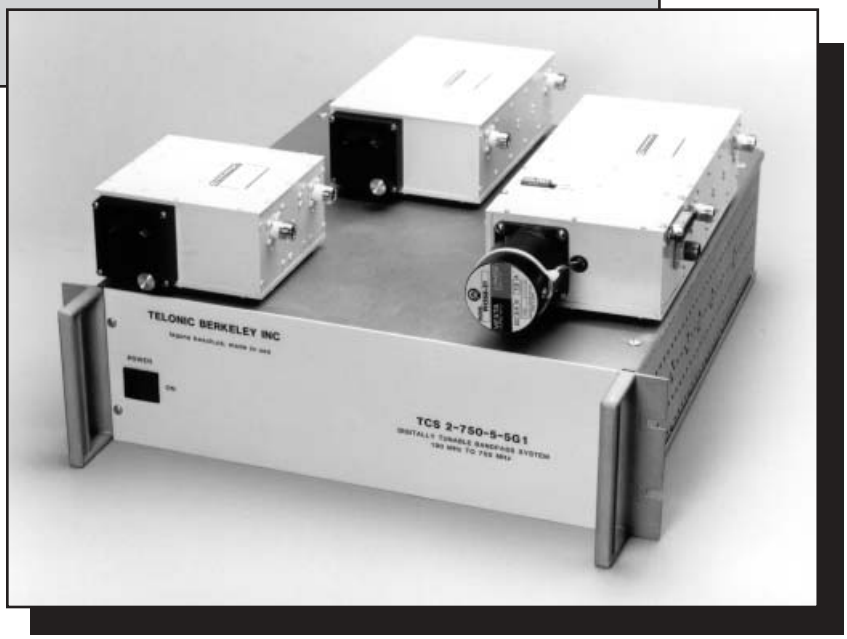
TTF Series 2
- ■ Single Octave Tuning Range
- ■ Direct Frequency Reading Dial
- ■ 5% Bandwidth
- ■ 1% Accuracy

TTR Series 3
- ■ Single Octave Tuning Range
- ■ Direct Frequency Reading Dial
- ■ 40 dB Notch Depth
- ■ Full Octave Passband

Computer Controlled Filters

TCD Series 4
- ■ Single Octave Tuning Range
- ■ 250 mSec Tuning Time
- ■ 5% Bandwidth
- ■ 1% Accuracy

TCS Series 5
- ■ Fully Automated Multiple Octave Tuning
- ■ Switching Transparent to RF Path
- ■ Convenient EIA Rack Package
- ■ Fully Contained Buss Listener



Telonic Berkeley, Inc. Tunable Bandpass and Bandstop Filters set the industry standard for performance, quality, and versatility. Covering HF, VHF, UHF, L-Band, and S-Band, we offer the broadest tuning range available in the world.

Tunable Bandpass Filters are 5% bandwidth, 5 section, iris coupled, 0.05dB ripple Tchebychev filters. Slotted box construction and air gap tuning capacitors provide the basis for the lowest available insertion loss and the highest rated power of any tunable filter.

Tunable Band Reject Filters are 0.1% reject bandwidth, stub tuned 3 section Tchebychev filters. Extremely narrow bandwidths and broad passbands make these filters excellent for EMC testing, harmonic and spurious signal evaluation, and noise figure measurement.

Buss Tuned Bandpass Filters are the test equipment engineer's dream, providing fully automated RF frequency testing over as much as six octaves frequency range. Tuning times of 250 msec assure speedy measurement as the filters are stepped through the frequency range.

Fc Range	TTF Manual Bandpass	TTR Manual Bandstop	TCD Computer Bandpass	Model For Ordering Number (n)
8-16	*	*	*	12
12-24	*	*	*	18
16-32	*	*	*	24
24-48	*	*	*	36
32-64	*	*	*	48
48-95	*	*	*	72
63-125	*	*	*	95
95-190	*	*	*	125
125-250	*	*	*	190
190-375	*	*	*	250
250-500	*	*	*	375
375-750	*	*	*	500
500-1000	*	*	*	750
750-1500	*	x	*	1000
1000-2000	*	x	*	1500
1500-3000	*	x	*	2250
2000-4000	*	x	*	3000

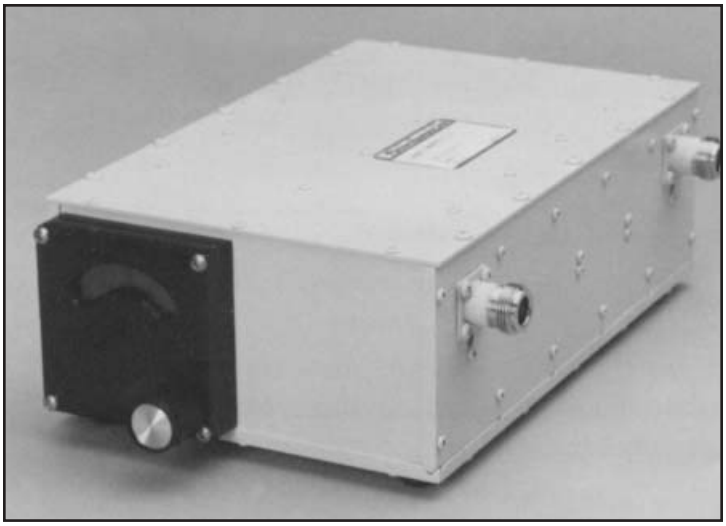
* *Standard Range*
x *Not Available*

Table 1 – Frequency (Fc) Ranges

Command Language	Code Letter	TCD Series
GPIB	G	5VDC @ 3.6A
RS-232C	S	5VDC @ 3.6A ±12VDC @ 0.1A
BCD	B	5VDC @ 3.6A

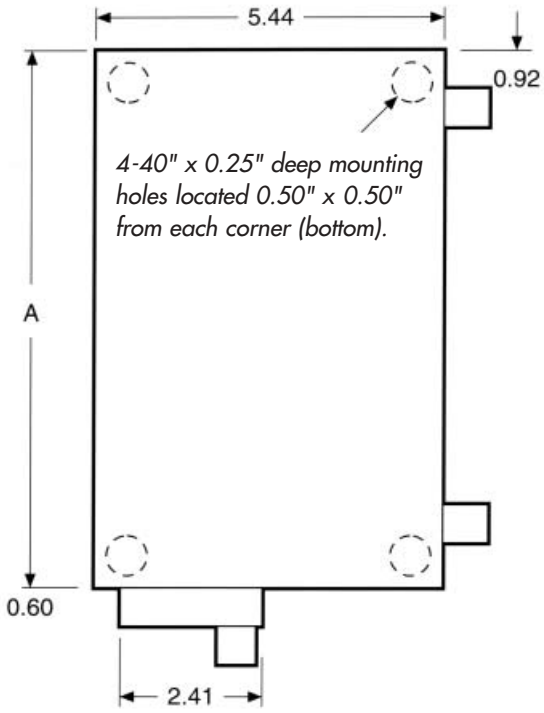
Table 2 – TCD Voltage/Current Requirements

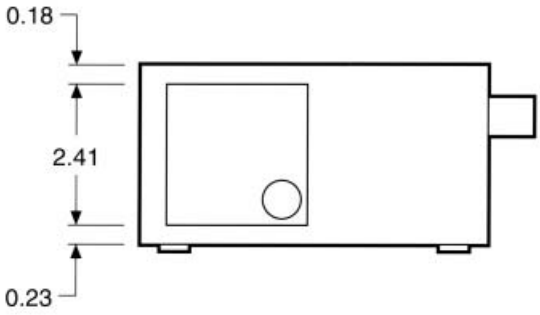
Series TTF Manually Tuned Bandpass Filters



General Specifications

Fc Tuning Range (See Table 1 on Page 1)	1 Octave
-3 dB Bandwidth	5% of FC nom.
I.L. at Fc	
TTF 12-TTF 24	2.5 dB max.
TTF 36-TTF 250	1.5 dB max.
TTF 375-TTF 3000	1.0 dB max.
-50 dB to -3 dB Bandwidth Ratio (form factor)	3.5 max.
Max. Power (CW) at Fc	50 Watts
Dial Accuracy	1% of Fc max.
Temperature Range	15-35° C
Connectors	Type N female
Dimensions	See Figure 1





Model	A
TTF 12-375	8.34
TTF 500	"
TTF 750	"
TTF 1000	"
TTF 1500	5.84
TTF 2250	"
TTF 3000	4.625

Figure 1 – Series TTF Dimensions

Ordering Information

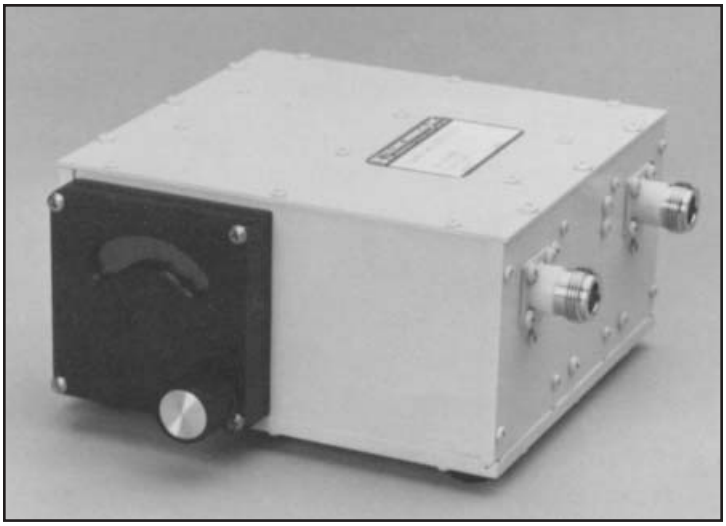
Specify "TTF n-5-5EE", where "n" indicates the ordering No. shown in Table 1 on Page 1.

Special Orders

TTF Series Tunable Bandpass Filters are available in special tuning ranges, special bandwidths and with special connectors. Please consult the factory for limitations and ordering information.

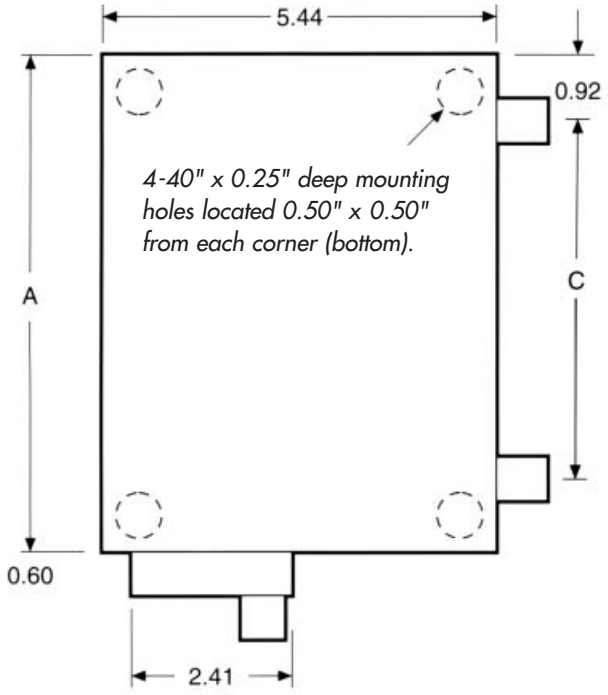
A convenient carrying case that will hold 6 filters is available.

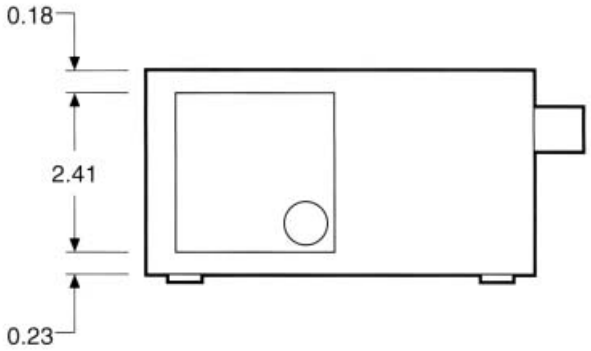
Series TTR Manually Tuned Bandstop Filters



General Specifications

Fc Tuning Range (See Table on Page 1)	1 Octave
-40 dB Bandwidth	0.1% of Fc nom.
Passband	Fc Range
Passband I.L. (2% of Fc from Fc)	1.0 dB max.
-1 dB Bandwidth	2.0% of Fc nom.
Max. Power (CW) at Fc	1 Watt
Dial Accuracy	1% of Fc max.
Temperature Range	15-35° C
Connectors	Type N female
Dimensions	See Figure 2





Model	A
TTR 12-190	6.72
TTR 250-500	5.09
TTR 750	5.09

Figure 2 – Series TTR Dimensions

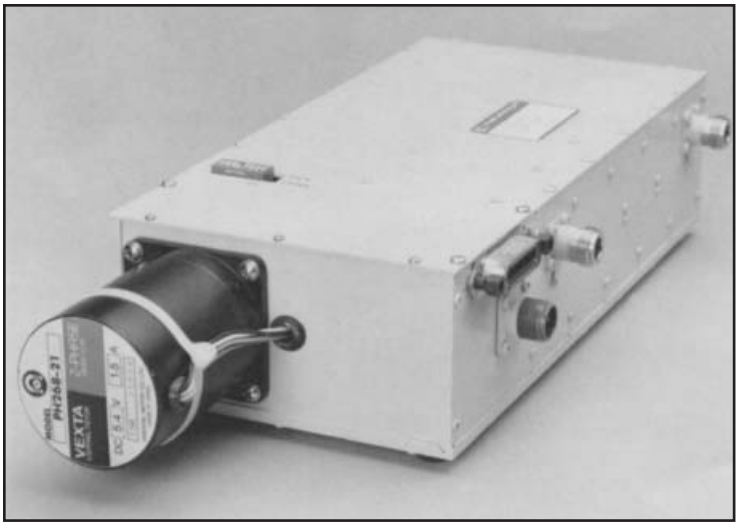
Ordering Information

Specify "TTR n-3EE", where "n" indicates ordering No. shown in Table 1 on Page 1.

Special Orders

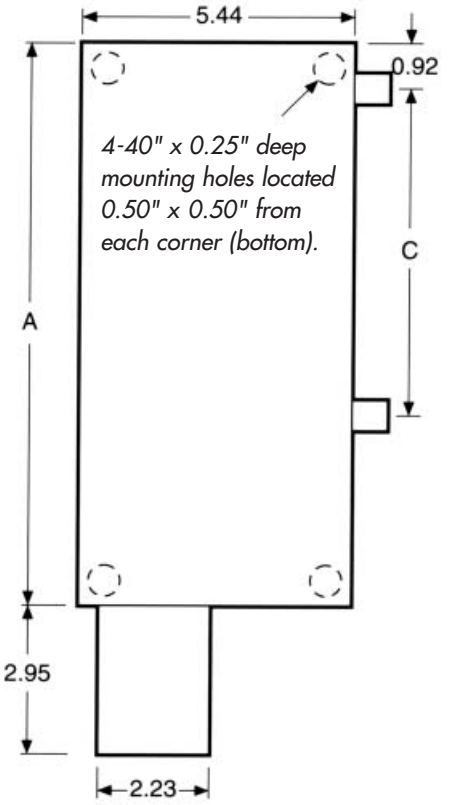
TTR Series Tunable Bandstop Filters are available in special tuning ranges or with special connectors. Please consult the factory for limitations and ordering information.

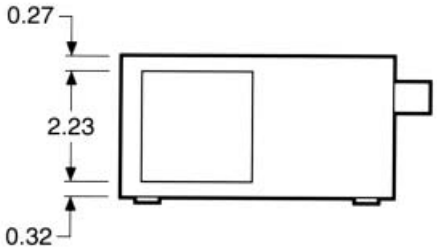
Series TCD Buss Tuned Bandpass Filters



General Specifications

Fc Tuning Range (See Table on Page 1)	1-6 Octaves
-3 dB Bandwidth	5% of Fc nom.
I.L. at Fc	
TCD 12 - 24	2.5 db max.
TCD 36 - TCD 250	1.5 dB max.
TCD 375 - TCD 1500	1.0 dB max.
-50 dB to -3 dB Bandwidth Ratio (form factor)	3.5 max.
Max. Power (CW) at Fc	50 Watts
Tuning Accuracy	1% of Fc max.
Temperature Range	15-35° C
Connectors	Type N female
Input Voltage/Current Requirements	See Table 2 (On page 1)
Filter Dimensions	See Figure 3





Model	Box length A	B	C	D
TCD 12-375	11.22	0.82	5.44	0.35
TCD 500	"	"	"	1.01
TCD 750	"	"	"	1.60
TCD 1000	"	"	"	2.21
TCD 1500	8.72	1.83	2.97	0.24
TCD 2250	"	"	"	"
TCD 3000	6.84	"	"	"

Figure 3 – Series TCD Dimensions

Ordering Information

Specify "TCD n-5-5p", where "n" indicates the ordering No. shown in Table 1 and "p" indicates the command language code letter as shown in Table 2 on Page 1.

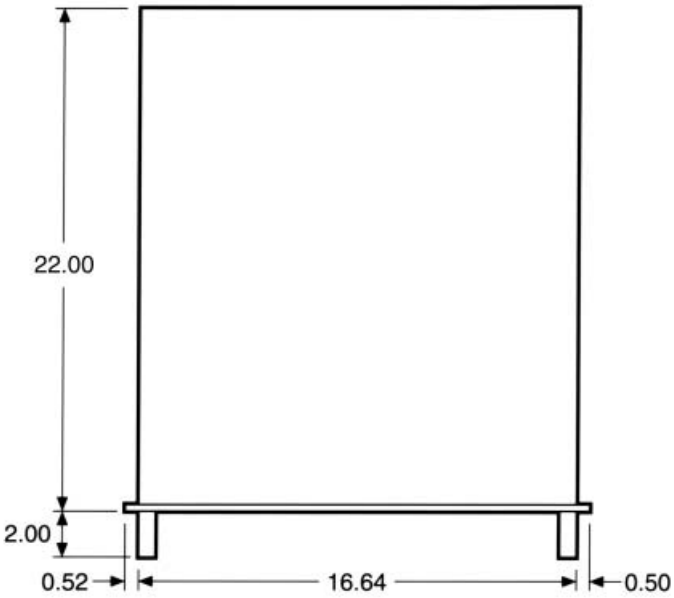
Special Orders

TCD Series Tunable Bandpass Filters are available in special tuning ranges, special bandwidths, with special connectors. Please consult the factory for limitations and ordering information.

Series TCS Multi-Octave Buss Tuned Filters

General Specifications

Fc Tuning Range (See Table 1 on Page 1)	1-6 Octaves
-3 dB Bandwidth	5% of Fc nom.
I.L. at FC	
24 MHz < Fc < 375 MHz	2.0 dB max.
375 MHz < Fc < 2000 MHz	1.5 dB max.
-50 dB to -3 dB Bandwidth Ratio (form factor)	3.5 max.
Max. Power (CW) at Fc	50 Watts
Tuning Accuracy	1% of Fc max.
Temperature Range	15-35° C
Connectors	Type N female
Input Voltage Requirements	110/220 VAC, 50-60 Hz
Filter Dimensions	See Figure 4



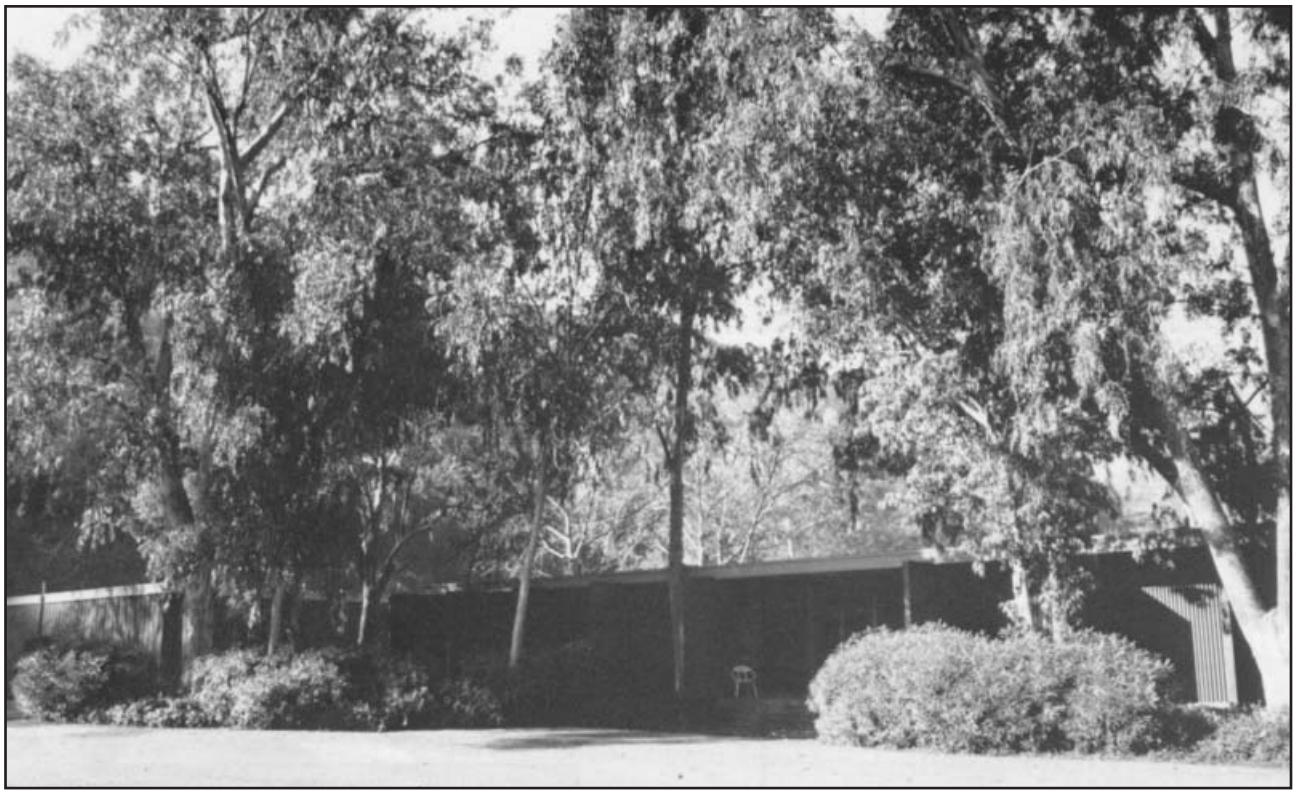
Ordering Information

Specify "TCS# f-5-5p", where "f" indicates the maximum tuned Fc, "#" indicates the number of contiguous octaves, and "p" indicates the command language shown in Table 2 on Page 1.

Special Orders

TCS Series Tunable Bandpass Filters are available in special tuning ranges, *special bandwidths, with special connectors. Please consult the factory for limitations and ordering information.

**Any standard TCD can be used.*



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