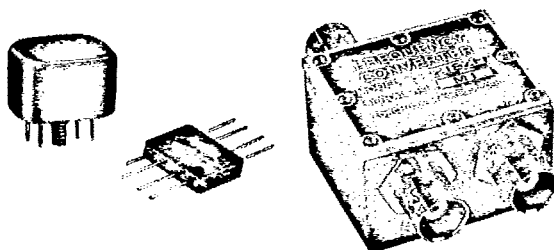


LOW LEVEL DOUBLE BALANCED MIXERS

PC, TO-5, TO-8, FLATPACK AND CONNECTOR VERSIONS

B-05-11
T-74-09-01

50 KHz to 1000 MHz
LO POWER 0dBm



PC VERSION	FLATPACK VERSION	CONN. VERSION	FREQ. RANGE
FC-193Y	FC-193YF	FC-194Y	50 KHz to 200 MHz
FC-193R	FC-193RF	FC-194R	1.0 to 400 MHz
FC-193Z	FC-193ZF	FC-194Z	10 to 1000 MHz

These Double Balanced Mixers are designed to provide excellent performance in three frequency ranges spanning 50 KHz to 1000 MHz. They are intended for use in applications where LO power is at a premium. The need for additional amplification to raise the LO power to levels required for conventional double balanced mixers is eliminated. Low conversion loss is obtained by the use of low loss ferrite transmission line networks whose superior balance contributes to the high isolation achieved. Schottky barrier diodes arranged in quads further ensure high isolation. A number of package styles are available to suit most applications. All PC, TO-5, TO-8 and Flatpack units are hermetically sealed and are leak tested prior to shipment.

PERFORMANCE DATA

PC VERSION		FLATPACK VERSION		CONNECTOR VERSION		FULL FREQUENCY RANGE MHz		FREQ. RANGE MHz PORTS W AND A	CONV. LOSS (MAX.) dB (NOTE 3)	ISOLATION (MIN.) dB			LO POWER NOM. (NOTE 3)	1 dB INPUT COMPRES- SION LEVEL (NOTE 3)	3RD ORDER INTER- CEPT POINT (NOTE 3)
MODEL	FIG. (NOTE 1)	MODEL	FIG.	MODEL	FIG. (NOTE 2)	PORTS W (LO) & A (RF)	PORT B (IF)			PORT W TO A	PORT W TO B	PORT A TO B			
FC-193Y	1	FC-193YF	9	FC-194Y	11	0.05-200	DC-200	0.05-0.2	7.5	40	40	25	0dBm to +3dBm	-5dBm	+10dBm
								0.2-30	6.5	40	40	20			
								30-100	6.5	35	25	15			
								100-200	7.5	35	25	15			
FC-193R	1	FC-193RF	9	FC-194R	11	1.0-400	DC-400	1.0-2.0	8.0	40	40	25	0dBm to +3dBm	-5dBm	+10dBm
								2.0-50	7.0	40	40	20			
								50-150	7.0	35	25	20			
								150-400	8.0	35	20	20			
FC-193Z	1	FC-193ZF	9	FC-194Z	11	10-1000	DC-1000	10-50	8.0	40	40	30	0dBm to +3dBm	-5dBm	+10dBm
								50-400	7.5	30	25	20			
								400-500	8.0	30	25	20			
								500-1000	8.0	25	20	15			

NOTES:

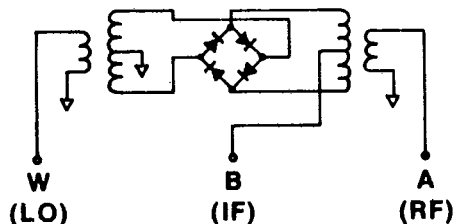
- The figure shown (Mixer Outline Drawings) is the standard case style. Alternate case styles, available on request, are Fig. 2, 3, 4, 7 and 8. To specify an alternate case style, add figure number to the model designation (e.g., FC-193R-4).
- The figure shown (Mixer Outline Drawings) is the standard case style. An alternate case style, available on request, is Figure 12. To specify the alternate case style, add the figure number to the model designation (e.g., FC-194-Z-12).
- See "Performance Notes".

GENERAL SPECIFICATIONS

The mixers are designed and constructed to meet or exceed the requirement of MIL-E-5400 & MIL-E-16400. Hi Rel programs are also available. All products are designed and constructed to meet or exceed the following environmental and physical conditions of MIL-STD-202.

Thermal Shock	Method 107D Test Condition A -55°C to +85°C, 30 minutes at each extreme
Vibration	Method 204 Test Condition B 10-2000 Hz 15G Peak
Moisture Resistance	Method 106D
Humidity	Method 103B Test Condition B
Solderability	Method 208
Resistance to Solvents	Method 215
Seal (Gross Leak) (PC and flatpack versions only)	Method 112B Test Condition D 10 ⁻⁵ ATM cc/sec
Impedance	For use in a 50 Ohm system
Polarity	With ports A and W in phase, dc at port B is negative with respect to ground.
DC Current, Any Port	40mA max.
Connectors	BNC standard SMA or TNC available

SCHEMATIC DIAGRAM



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