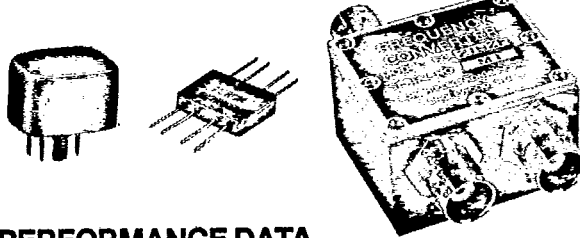


# GENERAL PURPOSE DOUBLE BALANCED MIXERS

## PC, FLATPACK AND CONNECTOR VERSIONS

 B-05-11  
 T74-09-01

**10 KHz to 225 MHz**  
**LO POWER +7dBm**


PC VERSION	FLATPACK VERSION	CONN. VERSION	FREQ. RANGE
FC-200YL		FC-201YL	10 KHz to 100 MHz
FC-200Y	FC-200YF	FC-201Y	50 KHz to 200 MHz
FC-200	FC-200F	FC-201	250 KHz to 225 MHz

Double Balanced Mixers Models FC-200YL, FC-201YL, FC-200Y, FC-200YF, FC-201Y, FC-200, FC-200F and FC-201 provide excellent basic performance in three frequency ranges spanning 10 KHz to 225 MHz, (RF and LO), and DC to 225 MHz (IF). 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 are "super-matched" in quads prior to assembly, using a special dynamic matching technique which further ensures high isolation. A number of package styles are available to suit most applications. All PC and flatpack units are hermetically sealed, and are leak tested prior to shipment.

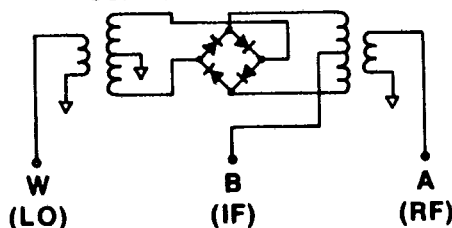
### PERFORMANCE DATA

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.	PORTS W (LO) & A (RF)	PORT B (IF)			PORT W TO A	PORT W TO B	PORT A TO B			
FC-200YL	1	—	—	FC-201YL	11	0.01-100	DC-100	0.01-0.05	7.5	50	50	30	+7dBm	0dBm	+12dBm
								0.05-10	6.0	50	50	30			
								10-60	6.0	35	30	30			
								60-100	7.5	35	30	20			
FC-200Y	1	FC-200YF	9	FC-201Y	11	0.05-200	DC-200	0.05-0.2	8.0	50	40	20	+7dBm	0dBm	+12dBm
								0.2-30	6.0	50	40	20			
								30-100	6.0	35	25	15			
								100-200	8.0	35	25	15			
FC-200	1	FC-200F	9	FC-201	11	0.25-225	DC-225	0.25-0.4	7.0	50	50	35	+7dBm	0dBm	+12dBm
								0.4-10	6.0	50	50	35			
								10-40	6.0	40	40	35			
								40-100	6.0	25	25	35			
								100-150	7.0	25	25	25			
								150-225	7.0	25	25	25			

#### 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 the figure number to the model designation (e.g., FC-200-8).
- The figure shown (Mixer Outline Drawings) is the standard case style. An alternate case style, available on request, is Fig. 12. To specify this style, add -12 to the model designation (e.g., FC-201Y-12).
- See "Performance Notes".

#### SCHEMATIC DIAGRAM



#### 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 <sup>-5</sup> ATM cc/sec
Impedance	For use in a 50 Ohm system
LO Power	Mixers should be operated at nominal LO power, with a tolerance of +4dB, -2dB. LO power should not exceed the nominal value shown by more than 6dB.
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

**LORCH ELECTRONICS**
**VERNITRON**  
 CORPORATION

 2801 72nd Street No., St. Petersburg, FL 33710  
 FAX: (813) 347-3881 (813) 347-2181