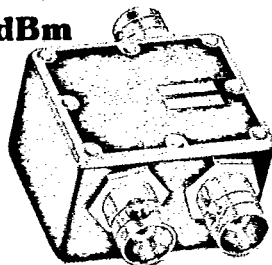
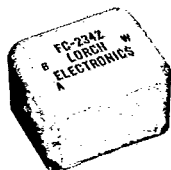


ULTRA LOW DISTORTION DOUBLE BALANCED MIXERS

PC AND CONNECTOR VERSIONS

10 KHz to 1000 MHz
LO POWER +20dBm



PC
VERSION
FC-234YL
FC-234R
FC-234Z

CONN.
VERSION
FC-235YL
FC-235R
FC-235Z

FREQ.
RANGE
10 KHz to 100 MHz
200 KHz to 500 MHz
2 to 1000 MHz

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

Models FC-234YL/FC-235YL, FC-234R/FC-235R and FC-234Z/FC-235Z are ultra low distortion mixers which cover the 10 KHz to 1000 MHz range, with excellent performance at moderate LO power. Low loss ferrite networks are used with special multiple junction diode quad arrangements in both discrete and integrated (chip) form. The wideband networks are optimized for best LO switching characteristic, which is significant in attaining low distortion performance. A variety of package styles are available, to suit most applications. All PC units are hermetically sealed and are leak tested (gross leak) prior to shipment.

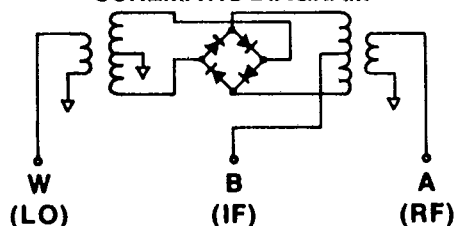
PERFORMANCE DATA

PC 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)	1dB INPUT COMPRESSION LEVEL (NOTE 3)	3RD ORDER INTERCEPT POINT (NOTE 3)
MODEL	FIG. (NOTE 1)	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-234YL	6	FC-235YL	11	0.01-100	DC-100	0.01-0.05	7.5	50	45	25	+20dBm	+16dBm	+27dBm
						0.05-2.0	6.5	50	45	25			
						2.0-10	6.5	45	40	25			
						10-25	6.5	35	25	25			
						25-60	6.5	35	25	15			
						60-100	7.5	35	25	15			
FC-234R	6	FC-235R	11	0.2-500	DC-500	0.2-10	7.0	50	45	30	+20dBm	+16dBm	+27dBm
						10-25	7.0	50	40	30			
						25-50	7.0	45	40	15			
						50-150	7.0	30	25	15			
						150-500	8.0	30	25	15			
FC-234Z	6	FC-235Z	11	2.0-1000	DC-1000	2.0-50	8.0	35	30	20	+20dBm	+16dBm	+27dBm
						50-400	8.0	35	30	20			
						400-500	8.5	35	30	20			
						500-1000	8.5	25	20	12			

NOTES:

- The figure shown (Mixer outline Drawings) is the standard case style. Alternate case styles, available on request, are Fig. 5 and Fig. 8. To specify an alternate case style, add the figure number to the model designation (e.g., FC-234Z-5).
- 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-235R-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 version only)	Method 112B Test Condition D 10 ⁻⁵ 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

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