

MIXERS

IMAGE REJECT



THROUGH HOLE MODELS

FREQUENCY (MHz)			LO LEVEL (dBm)	CONVERSION LOSS (dB)		IMAGE REJECTION (dB)		VSWR	INPUT 1 dB COMP. PT. (dBm)	INPUT IP ₃ (dBm)	ISOLATION (dB)		PACKAGE	PIN-OUT (See Below)	MODEL
LO	RF	IF		NOM	TYP	MAX	TYP				MIN	MAX			
40 - 80	20 - 100	20	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	60/35	55/30	124	1	IMP-921
40 - 80	10 - 110	30	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	60/35	55/30	124	1	IMP-931
80 - 160	60 - 180	20	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	55/35	50/30	124	1	IMP-922
80 - 160	50 - 190	30	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	55/35	50/30	124	1	IMP-932
80 - 160	40 - 200	40	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	55/35	50/30	124	1	IMP-942
80 - 160	20 - 220	60	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	55/35	50/30	124	1	IMP-962
80 - 160	10 - 230	70	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	55/35	50/30	124	1	IMP-972
100 - 200	80 - 220	20	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	50/35	45/30	124	1	IMP-923
100 - 200	70 - 230	30	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	50/35	45/30	124	1	IMP-933
100 - 200	60 - 240	40	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	50/35	45/30	124	1	IMP-943
100 - 200	40 - 260	60	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	50/35	45/30	124	1	IMP-963
100 - 200	30 - 270	70	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	50/35	45/30	124	1	IMP-973
150 - 300	130 - 320	20	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	45/35	40/30	124	1	IMP-924
150 - 300	120 - 330	30	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	45/35	40/30	124	1	IMP-934
150 - 300	110 - 340	40	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	45/35	40/30	124	1	IMP-944
150 - 300	90 - 360	60	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	45/35	40/30	124	1	IMP-964
150 - 300	80 - 370	70	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	45/35	40/30	124	1	IMP-974
200 - 400	180 - 420	20	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	40/35	35/30	124	1	IMP-925
200 - 400	170 - 430	30	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	40/35	35/30	124	1	IMP-935
200 - 400	160 - 440	40	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	40/35	35/30	124	1	IMP-945
200 - 400	140 - 460	60	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	40/35	35/30	124	1	IMP-965
200 - 400	130 - 470	70	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	40/35	35/30	124	1	IMP-975
400 - 550	400 - 550	50 - 90	+ 13	7	9	25	17	1.5:1	+ 6	+ 18	43/35	35/25	124	2	IMP-916
550 - 750	550 - 750	50 - 90	+ 13	7	9	25	17	1.5:1	+ 6	+ 18	42/35	35/25	124	2	IMP-926
750 - 1000	750 - 1000	50 - 90	+ 13	7.5	9	25	17	1.5:1	+ 6	+ 18	40/35	35/25	124	2	IMP-936
1358 - 1453	1428 - 1523	70	+ 10	7	9	20	15	2:1	- 4	+ 10	30/25	20/15	124	1	IMP-917
2238 - 2410	2308 - 2480	70	+ 10	7	9	20	15	2:1	- 4	+ 10	25/20	20/15	124	1	IMP-928

Notes:

IF₁ is rejected when the RF frequency is lower than the LO frequency.

IF₂ is rejected when the RF frequency is higher than the LO frequency.

Nominal impedance = 50 ohms.

Maximum RF input power without damage 200 mW.

PIN-OUT TABLE

	RF	LO	IF ₁	IF ₂	CASE GND
#1	1	16	4	13	All Other
#2	3	16	1	5	All Other

For pin location and package outline drawings, see back pages.

MIXERS

IMAGE REJECT



COAXIAL CONNECTOR MODELS

FREQUENCY (MHz)			LO LEVEL (dBm)	CONVERSION LOSS (dB)		IMAGE REJECTION (dB)		VSWR	INPUT 1 dB COMP. PT. (dBm)	INPUT IP ₃ (dBm)	ISOLATION (dB)		PACKAGE	PIN-OUT (See Below)	MODEL
LO	RF	IF		NOM	TYP	MAX	TYP				MIN	MAX			
3 - 30	3 - 30	10.7	+13	7	9	20	17	2:1	+6	+18	60/35	55/35	153	2	IRK3A-10
20 - 500	20 - 500	10 - 11	+10	7	9.5	20	15	2:1	+3	+15	38/35	30/25	153	2	IRK20A-25
30 - 450	30 - 450	21.4	+13	7	10	20	15	2:1	+6	+18	38/35	30/25	153	2	IRK30A-15
40 - 80	20 - 100	20	+10	7.5	9	30	20	1.5:1	+3	+15	60/35	55/30	113	1	IMK-721*
40 - 80	10 - 110	30	+10	7.5	9	30	20	1.5:1	+3	+15	60/35	55/30	113	1	IMK-731*
80 - 160	60 - 180	20	+10	7.5	9	30	20	1.5:1	+3	+15	55/35	50/30	113	1	IMK-722*
80 - 160	50 - 190	30	+10	7.5	9	30	20	1.5:1	+3	+15	55/35	50/30	113	1	IMK-732*
80 - 160	40 - 200	40	+10	7.5	9	30	20	1.5:1	+3	+15	55/35	50/30	113	1	IMK-742*
80 - 160	20 - 220	60	+10	7.5	9	30	20	1.5:1	+3	+15	55/35	50/30	113	1	IMK-762*
80 - 160	10 - 230	70	+10	7.5	9	30	20	1.5:1	+3	+15	55/35	50/30	113	1	IMK-772*
100 - 200	80 - 220	20	+10	7.5	9	30	20	1.5:1	+3	+15	50/35	45/30	113	1	IMK-723*
100 - 200	70 - 230	30	+10	7.5	9	30	20	1.5:1	+3	+15	50/35	45/30	113	1	IMK-733*
100 - 200	60 - 240	40	+10	7.5	9	30	20	1.5:1	+3	+15	50/35	45/30	113	1	IMK-743*
100 - 200	40 - 260	60	+10	7.5	9	30	20	1.5:1	+3	+15	50/35	45/30	113	1	IMK-763*
100 - 200	30 - 270	70	+10	7.5	9	30	20	1.5:1	+3	+15	50/35	45/30	113	1	IMK-773*
150 - 300	130 - 320	20	+10	7.5	9	30	20	1.5:1	+3	+15	45/35	40/30	113	1	IMK-724*
150 - 300	120 - 330	30	+10	7.5	9	30	20	1.5:1	+3	+15	45/35	40/30	113	1	IMK-734*
150 - 300	110 - 340	40	+10	7.5	9	30	20	1.5:1	+3	+15	45/35	40/30	113	1	IMK-744*
150 - 300	90 - 360	60	+10	7.5	9	30	20	1.5:1	+3	+15	45/35	40/30	113	1	IMK-764*
150 - 300	80 - 370	70	+10	7.5	9	30	20	1.5:1	+3	+15	45/35	40/30	113	1	IMK-774*
200 - 400	180 - 420	20	+10	7.5	9	30	20	1.5:1	+3	+15	40/35	35/30	113	1	IMK-725*
200 - 400	170 - 430	30	+10	7.5	9	30	20	1.5:1	+3	+15	40/35	35/30	113	1	IMK-735*
200 - 400	160 - 440	40	+10	7.5	9	30	20	1.5:1	+3	+15	40/35	35/30	113	1	IMK-745*
200 - 400	140 - 460	60	+10	7.5	9	30	20	1.5:1	+3	+15	40/35	35/30	113	1	IMK-765*
200 - 400	130 - 470	70	+10	7.5	9	30	20	1.5:1	+3	+15	40/35	35/30	113	1	IMK-775*
500 - 1110	500 - 1110	10 - 11	+10	7	10	20	15	2:1	+2	+12	38/25	32/20	153	2	IRK500A-2
600 - 900	890 - 910	10 - 300	+23	7	10	23	20	1.8:1	+16	+25	30/20	25/20	153	2	IRK600A-1
658	660 - 680	2 - 22	+10	7	9	23	17	1.8:1	+2	+13	40/35	35/27	153	2	IRK658A-1
800 - 2000	800 - 2000	21.4	+13	7	10	20	15	2:1	+5	+16	35/30	30/20	153	2	IRK800A-2
2200 - 2414	2483 - 2500	225	+10	7	10	23	18	2:1	+2	+12	35/30	28/20	113	1	IMK-718S
2500 - 2750	2435 - 2685	65 - 75	+10	7	9	20	15	2.2:1	+2	+12	30/25	25/20	113	1	IMK-738S

Notes:

IF₁ is rejected when the RF frequency is lower than the LO frequency.
 IF₂ is rejected when the RF frequency is higher than the LO frequency.
 Nominal impedance = 50 ohms.
 Maximum RF input power without damage 200 mW.

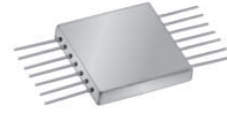
*Select female connector suffix: S=SMA, B=BNC, N=Type N, T=TNC.
 All other models numbers are available with SMA connectors only.

PORT CONFIGURATION TABLE

	RF	LO	IF ₁	IF ₂
#1	1	3	2	4
#2	3	1	2	4

For pin location and package outline drawings, see back pages.

MIXERS IMAGE REJECT



FLAT PACK MODELS

FREQUENCY (MHz)			LO LEVEL (dBm)	CONVERSION LOSS (dB)		IMAGE REJECTION (dB)		VSWR	INPUT 1 dB COMP. PT. (dBm)	INPUT IP ₃ (dBm)	ISOLATION (dB)		PACKAGE	PIN-OUT (See Below)	MODEL
LO	RF	IF		TYP	MAX	TYP	MIN				MAX	MIN			
40 - 80	20 - 100	20	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	60/35	55/30	115	1	IMF-221
40 - 80	10 - 110	30	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	60/35	55/30	115	1	IMF-231
80 - 160	60 - 180	20	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	55/35	50/30	115	1	IMF-222
80 - 160	50 - 190	30	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	55/35	50/30	115	1	IMF-232
80 - 160	40 - 200	40	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	55/35	50/30	115	1	IMF-242
80 - 160	20 - 220	60	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	55/35	50/30	115	1	IMF-262
80 - 160	10 - 230	70	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	55/35	50/30	115	1	IMF-272
100 - 200	80 - 220	20	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	50/35	45/30	115	1	IMF-223
100 - 200	70 - 230	30	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	50/35	45/30	115	1	IMF-233
100 - 200	60 - 240	40	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	50/35	45/30	115	1	IMF-243
100 - 200	40 - 260	60	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	50/35	45/30	115	1	IMF-263
100 - 200	30 - 270	70	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	50/35	45/30	115	1	IMF-273
150 - 300	130 - 320	20	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	45/35	40/30	115	1	IMF-224
150 - 300	120 - 330	30	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	45/35	40/30	115	1	IMF-234
150 - 300	110 - 340	40	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	45/35	40/30	115	1	IMF-244
150 - 300	90 - 360	60	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	45/35	40/30	115	1	IMF-264
150 - 300	80 - 370	70	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	45/35	40/30	115	1	IMF-274
200 - 400	180 - 420	20	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	40/35	35/30	115	1	IMF-225
200 - 400	170 - 430	30	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	40/35	35/30	115	1	IMF-235
200 - 400	160 - 440	40	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	40/35	35/30	115	1	IMF-245
200 - 400	140 - 460	60	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	40/35	35/30	115	1	IMF-265
200 - 400	130 - 470	70	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	40/35	35/30	115	1	IMF-275

Notes:

IF₁ is rejected when the RF frequency is lower than the LO frequency.

IF₂ is rejected when the RF frequency is higher than the LO frequency.

Nominal impedance = 50 ohms.

Maximum RF input power without damage 200 mW.

PIN-OUT TABLE

	RF	LO	IF ₁	IF ₂	CASE GND
#1	1	14	3	10	All Other

For pin location and package outline drawings, see back pages.

MIXERS

IMAGE REJECT



SURFACE-MOUNT MODELS

FREQUENCY (MHz)			LO LEVEL (dBm)	CONVERSION LOSS (dB)		IMAGE REJECTION (dB)		VSWR	INPUT 1 dB COMP. PT. (dBm)	INPUT IP ₃ (dBm)	ISOLATION (dB)		PACKAGE	PIN-OUT (See Below)	MODEL
LO	RF	IF		NOM	TYP	MAX	TYP				MIN	MAX			
40 - 80	20 - 100	20	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	60/35	55/30	124S	1	IMS-921
40 - 80	10 - 110	30	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	60/35	55/30	124S	1	IMS-931
80 - 160	60 - 180	20	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	55/35	50/30	124S	1	IMS-922
80 - 160	50 - 190	30	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	55/35	50/30	124S	1	IMS-932
80 - 160	40 - 200	40	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	55/35	50/30	124S	1	IMS-942
80 - 160	20 - 220	60	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	55/35	50/30	124S	1	IMS-962
80 - 160	10 - 230	70	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	55/35	50/30	124S	1	IMS-972
100 - 200	80 - 220	20	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	50/35	45/30	124S	1	IMS-923
100 - 200	70 - 230	30	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	50/35	45/30	124S	1	IMS-933
100 - 200	60 - 240	40	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	50/35	45/30	124S	1	IMS-943
100 - 200	40 - 260	60	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	50/35	45/30	124S	1	IMS-963
100 - 200	30 - 270	70	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	50/35	45/30	124S	1	IMS-973
150 - 300	130 - 320	20	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	45/35	40/30	124S	1	IMS-924
150 - 300	120 - 330	30	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	45/35	40/30	124S	1	IMS-934
150 - 300	110 - 340	40	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	45/35	40/30	124S	1	IMS-944
150 - 300	90 - 360	60	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	45/35	40/30	124S	1	IMS-964
150 - 300	80 - 370	70	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	45/35	40/30	124S	1	IMS-974
200 - 400	180 - 420	20	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	40/35	35/30	124S	1	IMS-925
200 - 400	170 - 430	30	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	40/35	35/30	124S	1	IMS-935
200 - 400	160 - 440	40	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	40/35	35/30	124S	1	IMS-945
200 - 400	140 - 460	60	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	40/35	35/30	124S	1	IMS-965
200 - 400	130 - 470	70	+ 10	7.5	9	30	20	1.5:1	+ 3	+ 15	40/35	35/30	124S	1	IMS-975
400 - 550	400 - 550	50-90	+ 13	7	9	25	17	1.5:1	+ 6	+ 18	43/35	35/28	124S	2	IMS-916
550 - 750	550 - 750	50-90	+ 13	7	9	25	17	1.5:1	+ 6	+ 18	42/35	35/28	124S	2	IMS-926
750 - 1000	750 - 1000	50-90	+ 13	7.5	9	25	17	1.5:1	+ 6	+ 18	40/35	35/23	124S	2	IMS-936
1358 - 1453	1428 - 1523	70	+ 10	7	9	20	15	2:1	- 4	+ 10	30/25	20/15	124S	1	IMS-917
2238 - 2410	2308 - 2480	70	+ 10	7	9	20	15	2:1	- 4	+ 10	25/20	20/15	124S	1	IMS-928

Notes:

IF₁ is rejected when the RF frequency is lower than the LO frequency.

IF₂ is rejected when the RF frequency is higher than the LO frequency.

Nominal impedance = 50 ohms.

Maximum RF input power without damage 200 mW.

PIN-OUT TABLE

	RF	LO	IF ₁	IF ₂	CASE GND
#1	1	16	4	13	All Other
#2	3	16	1	5	All Other

For pin location and package outline drawings, see back pages.