

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



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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	MIN	LO/RF TYP/MIN	LO/IF TYP/MIN			
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				LO/RF TYP/MIN	LO/IF TYP/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.

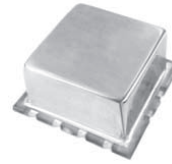
PIN-OUT TABLE

	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		TYP	MAX	TYP	MIN				LO/RF TYP/MIN	LO/IF TYP/MIN			
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.