

Frequency Mixer

ZFY-1+

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	CONVERSION LOSS IF FIXED @IF(OUT)=30MHz (dB)		
		@LO (dBm)		
		+20	+23	+26
0.1	30.1	6.28	5.89	5.76
1.0	31.0	6.16	5.82	5.76
10.0	40.0	5.92	5.59	5.69
20.1	50.1	5.43	5.11	4.95
30.1	60.1	5.49	5.13	4.94
40.1	70.1	5.49	5.13	4.96
50.1	80.1	5.52	5.15	4.98
70.1	100.1	5.75	5.32	5.09
90.1	120.1	5.87	5.44	5.18
110.1	140.1	5.68	5.30	5.09
130.1	160.1	5.81	5.37	5.11
150.1	180.1	6.09	5.49	5.19
170.1	200.1	6.07	5.51	5.24
190.1	220.1	6.26	5.69	5.36
220.1	250.1	6.08	5.50	5.23
250.1	280.1	6.43	5.71	5.41
280.1	310.1	6.29	5.73	5.49
340.1	370.1	6.60	5.85	5.59
370.1	400.1	6.40	5.82	5.63
400.1	430.1	6.32	5.79	5.62
450.1	480.1	7.27	6.28	6.01
500.1	530.1	7.30	6.33	6.01
550.1	580.1	8.11	6.82	6.39
600.1	630.1	7.81	6.64	6.30
650.1	680.1	8.44	7.00	6.60
700.1	730.1	7.77	6.63	6.35
800.1	830.1	7.70	6.76	6.49
900.1	930.1	7.68	6.82	6.53
1000.1	1030.1	8.48	7.64	7.31
1200.1	1230.1	7.62	7.08	6.90
1300.1	1330.1	7.71	7.17	6.98
1400.1	1430.1	7.85	7.29	7.10
1500.1	1530.1	7.92	7.35	7.17
1600.1	1630.1	8.10	7.47	7.26
1700.1	1730.1	8.60	7.78	7.48
1800.1	1830.1	9.10	8.16	7.83
1900.1	1930.1	9.52	8.55	8.20
2000.1	2030.1	10.08	9.11	8.69
2100.1	2130.1	10.66	9.76	9.37
2200.1	2230.1	10.89	10.09	9.69

RF (IN) (MHz)	LO (MHz)	IP3 INPUT (dBm)		
		@LO (dBm)		
		+20	+23	+26
10.1	40.1	32.81	32.55	33.26
20.1	50.1	34.30	35.03	35.57
30.1	60.1	35.53	34.86	35.46
40.1	70.1	34.58	34.98	35.65
50.1	80.1	39.15	34.03	34.78
70.1	100.1	32.12	33.43	32.86
90.1	120.1	30.36	32.76	33.06
110.1	140.1	33.83	33.48	34.86
130.1	160.1	30.69	31.91	34.55
150.1	180.1	28.48	31.64	37.10
170.1	200.1	30.02	32.14	34.82
190.1	220.1	28.03	31.17	34.86
220.1	250.1	30.10	33.72	34.42
250.1	280.1	30.03	35.24	35.23
280.1	310.1	30.49	32.72	35.11
310.1	340.1	32.53	34.72	36.30
340.1	370.1	33.95	39.53	38.21
370.1	400.1	35.83	35.88	35.46
400.1	430.1	37.10	38.33	36.87
450.1	480.1	34.35	36.76	40.14
500.1	530.1	27.51	37.22	38.23
550.1	580.1	35.31	33.62	36.65
600.1	630.1	27.71	37.44	36.09
650.1	680.1	29.19	33.53	34.38
700.1	730.1	31.14	34.14	36.70
800.1	830.1	32.10	31.33	36.17
900.1	930.1	28.96	31.39	35.60
1000.1	1030.1	31.83	35.22	38.80
1100.1	1130.1	30.83	28.87	35.03
1200.1	1230.1	28.60	30.53	37.24
1300.1	1330.1	29.16	33.29	37.49
1400.1	1430.1	27.03	29.28	35.00
1500.1	1530.1	26.14	29.63	33.77
1600.1	1630.1	25.61	30.55	35.66
1700.1	1730.1	25.94	28.31	36.25
1800.1	1830.1	27.14	27.00	31.83
1900.1	1930.1	25.36	26.36	34.39
2000.1	2030.1	24.42	29.20	34.54
2100.1	2130.1	25.67	30.12	32.94
2200.1	2230.1	25.62	29.72	33.50

RF (IN) (MHz)	LO (MHz)	COMPRESSION @RF IN=+19.92dBm (dB)		
		@LO (dBm)		
		+20	+23	+26
10.1	40.1	1.00	0.52	0.28
20.1	50.1	1.22	0.71	0.43
30.1	60.1	1.36	0.80	0.47
40.1	70.1	1.28	0.73	0.40
50.1	80.1	1.24	0.63	0.32
70.1	100.1	0.91	0.43	0.18
90.1	120.1	0.87	0.47	0.24
110.1	140.1	1.06	0.60	0.33
130.1	160.1	1.18	0.74	0.45
150.1	180.1	1.14	0.70	0.40
170.1	200.1	0.90	0.44	0.19
190.1	220.1	0.70	0.41	0.23
220.1	250.1	1.14	0.71	0.42
250.1	280.1	0.98	0.52	0.28
280.1	310.1	0.67	0.36	0.16
310.1	340.1	1.05	0.60	0.34
340.1	370.1	1.04	0.50	0.25
370.1	400.1	0.56	0.24	0.09
400.1	430.1	0.86	0.41	0.21
450.1	480.1	0.48	0.21	0.07
500.1	530.1	0.46	0.33	0.20
550.1	580.1	0.18	0.12	0.05
600.1	630.1	0.40	0.30	0.17
650.1	680.1	0.20	0.20	0.08
700.1	730.1	0.81	0.37	0.18
800.1	830.1	1.01	0.39	0.18
900.1	930.1	1.07	0.44	0.22
1000.1	1030.1	0.85	0.32	0.15
1100.1	1130.1	1.21	0.46	0.21
1200.1	1230.1	1.35	0.50	0.19
1300.1	1330.1	1.33	0.52	0.21
1400.1	1430.1	1.30	0.54	0.23
1500.1	1530.1	1.29	0.56	0.25
1600.1	1630.1	1.26	0.54	0.23
1700.1	1730.1	1.09	0.48	0.22
1800.1	1830.1	0.97	0.42	0.22
1900.1	1930.1	1.09	0.50	0.26
2000.1	2030.1	1.12	0.55	0.29
2100.1	2130.1	1.22	0.61	0.33
2200.1	2230.1	1.47	0.81	0.44

REV. X2

ZFY-1+

100818

Page 1 of 5



IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED • RoHS compliant

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661



The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see



Frequency Mixer

ZFY-1+

Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=250.1MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=10.1MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=500.1MHz (dB)
		@LO (dBm)			@LO (dBm)			@LO (dBm)
		+23			+23			+23
0.5	249.6	5.91	0.5	10.6	5.17	0.5	499.6	6.43
1.0	249.1	5.87	0.8	10.9	5.16	0.8	499.4	6.44
1.5	248.6	5.85	1.0	11.1	5.14	1.0	499.1	6.40
2.0	248.1	5.85	2.0	12.1	5.10	2.0	498.1	6.35
2.5	247.6	5.82	3.0	13.1	5.09	3.0	497.1	6.33
3.0	247.1	5.83	4.0	14.1	5.09	4.0	496.1	6.32
4.0	246.1	5.81	5.0	15.1	5.09	5.0	495.1	6.30
5.0	245.1	5.82	6.0	16.1	5.09	6.0	494.1	6.29
6.0	244.1	5.81	8.0	18.1	5.12	8.0	492.1	6.28
8.0	242.1	5.78	10.0	20.1	5.12	10.0	490.1	6.26
10.0	240.1	5.75	15.0	25.1	5.14	15.0	485.1	6.24
15.0	235.1	5.64	20.0	30.1	5.18	20.0	480.1	6.27
20.0	230.1	5.65	25.0	35.1	5.19	25.0	475.1	6.30
25.0	225.1	5.69	30.0	40.1	5.13	30.0	470.1	6.37
30.0	220.1	5.79	35.0	45.1	5.06	35.0	465.1	6.40
35.0	215.1	5.82	40.0	50.1	5.10	40.0	460.1	6.36
40.0	210.1	5.76	45.0	55.1	5.14	45.0	455.1	6.32
45.0	205.1	5.73	50.0	60.1	5.17	50.0	450.1	6.31
50.0	200.1	5.73	70.0	80.1	5.12	70.0	430.1	6.29
55.0	195.1	5.79	90.0	100.1	5.11	90.0	410.1	6.35
60.0	190.1	5.93	110.0	120.1	5.19	110.0	390.1	6.33
65.0	185.1	5.96	130.0	140.1	5.04	130.0	370.1	6.52
70.0	180.1	5.85	150.0	160.1	5.15	150.0	350.1	6.45
80.0	170.1	5.77	170.0	180.1	5.12	170.0	330.1	6.46
90.0	160.1	5.94	190.0	200.1	5.04	190.0	310.1	6.59
100.0	150.1	5.99	210.0	220.1	5.14	210.0	290.1	6.50
110.0	140.1	5.84	230.0	240.1	5.00	230.0	270.1	6.67
120.0	130.1	5.95	250.0	260.1	4.99	250.0	250.1	6.93
130.0	120.1	5.87	270.0	280.1	5.02	270.0	230.1	6.80
140.0	110.1	5.86	290.0	300.1	4.98	290.0	210.1	6.90
150.0	100.1	5.87	310.0	320.1	4.99	310.0	190.1	7.06
160.0	90.1	5.87	330.0	340.1	4.97	330.0	170.1	6.87
170.0	80.1	5.74	350.0	360.1	5.00	350.0	150.1	7.03
180.0	70.1	5.80	370.0	380.1	5.00	370.0	130.1	7.08
190.0	60.1	5.88	390.0	400.1	5.01	390.0	110.1	6.82
200.0	50.1	5.79	410.0	420.1	5.00	410.0	90.1	6.87
210.0	40.1	5.72	430.0	440.1	5.03	430.0	70.1	6.68
220.0	30.1	5.70	450.0	460.1	5.14	450.0	50.1	6.60
230.0	20.1	5.63	470.0	480.1	5.14	470.0	30.1	6.59
240.0	10.1	5.60	490.0	500.1	5.22	490.0	10.1	6.40

REV. X2

ZFY-1+

100818

Page 2 of 5



IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED • RoHS compliant

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661



The Design Engineers Search Engine finds the model you need, instantly • For detailed performance specs & shopping online see



Frequency Mixer

ZFY-1+

Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)		
	@LO (dBm)			@LO (dBm)		
	+20	+23	+26	+20	+23	+26
0.1	22.66	25.02	26.96	23.83	25.81	26.67
1.0	43.67	46.68	49.99	43.91	47.33	50.33
10.0	43.93	47.08	50.18	44.24	47.94	50.52
20.1	61.26	66.77	69.13	46.60	49.51	51.71
30.1	59.65	64.98	68.14	45.78	48.58	50.55
40.1	58.51	62.94	65.41	45.52	47.97	49.78
50.1	56.82	61.75	65.32	45.61	47.89	49.26
70.1	54.00	58.76	63.59	45.04	46.82	47.23
90.1	52.00	57.20	63.29	45.07	46.13	45.59
110.1	50.40	55.79	61.17	45.18	45.41	44.57
130.1	48.92	53.90	58.70	44.43	44.65	44.16
150.1	48.11	52.78	57.28	45.13	44.49	43.42
170.1	47.00	51.33	55.55	45.12	43.66	41.91
190.1	45.67	50.19	54.58	44.44	42.65	40.63
220.1	44.46	47.96	51.24	43.77	42.01	40.44
250.1	43.66	46.94	49.99	44.23	41.48	39.63
280.1	42.70	45.67	48.53	45.81	40.80	38.10
340.1	40.36	42.71	45.39	46.90	40.92	38.34
370.1	38.91	41.39	44.21	52.67	41.34	37.46
400.1	38.03	40.34	43.33	47.48	40.50	37.42
450.1	36.70	38.83	41.83	49.82	42.18	37.89
500.1	35.93	37.72	39.83	45.21	41.45	38.08
550.1	37.06	38.87	39.81	41.33	42.72	39.08
600.1	39.33	39.83	41.06	37.68	39.77	38.93
650.1	39.40	38.94	40.79	35.27	37.97	38.78
700.1	36.40	38.36	41.28	33.83	36.08	37.83
800.1	38.81	43.99	50.77	32.58	34.63	36.67
900.1	46.71	45.72	42.81	31.59	33.95	36.44
1000.1	31.15	32.50	33.92	31.00	33.62	36.47
1200.1	31.31	36.58	42.12	29.03	31.14	33.33
1300.1	31.90	37.79	43.31	30.00	31.65	33.31
1400.1	30.52	37.10	42.28	31.93	33.66	35.61
1500.1	28.53	33.95	38.03	34.08	37.51	40.68
1600.1	26.86	30.41	33.37	35.97	43.35	49.75
1700.1	26.45	29.18	31.75	37.98	51.99	43.26
1800.1	27.22	29.22	30.78	38.51	48.64	36.94
1900.1	27.86	29.88	31.16	39.38	40.52	32.86
2000.1	28.12	31.50	33.97	45.90	36.08	30.48
2100.1	29.11	34.20	38.95	46.02	32.20	28.41
2200.1	26.74	31.05	35.43	37.92	29.56	26.66

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB)		
		@LO (dBm)		
		+20	+23	+26
10.1	40.1	31.56	32.59	36.51
20.1	50.1	31.36	32.67	36.93
30.1	60.1	30.65	31.94	33.58
40.1	70.1	30.98	31.79	32.01
50.1	80.1	31.06	31.83	31.43
70.1	100.1	31.32	31.99	31.55
90.1	120.1	30.53	31.47	32.38
110.1	140.1	31.20	32.39	36.50
130.1	160.1	31.47	32.29	33.26
150.1	180.1	30.49	31.35	31.92
170.1	200.1	31.65	32.32	33.12
190.1	220.1	31.58	32.15	35.16
220.1	250.1	32.57	33.26	33.26
250.1	280.1	33.29	34.82	33.72
280.1	310.1	33.22	34.54	35.17
310.1	340.1	32.02	33.78	34.38
340.1	370.1	32.38	33.44	32.99
370.1	400.1	33.13	33.11	33.58
400.1	430.1	32.73	32.61	33.07
450.1	480.1	32.83	33.68	34.04
500.1	530.1	31.53	34.47	36.15
550.1	580.1	33.90	39.84	44.54
600.1	630.1	31.31	40.39	41.22
650.1	680.1	31.39	41.04	38.77
700.1	730.1	32.03	37.80	34.46
800.1	830.1	26.53	33.01	34.99
900.1	930.1	25.00	31.73	36.75
1000.1	1030.1	27.33	30.57	29.94
1100.1	1130.1	26.75	27.68	27.23
1200.1	1230.1	27.36	26.99	26.67
1300.1	1330.1	31.88	29.22	28.08
1400.1	1430.1	42.67	33.49	30.14
1500.1	1530.1	36.96	33.51	31.62
1600.1	1630.1	35.43	33.21	32.17
1700.1	1730.1	35.25	32.83	32.63
1800.1	1830.1	34.20	34.88	34.16
1900.1	1930.1	33.79	40.15	38.01
2000.1	2030.1	34.98	42.46	49.51
2100.1	2130.1	36.68	43.81	45.62
2200.1	2230.1	36.69	40.39	41.45

REV. X2

ZFY-1+

100818

Page 3 of 5

Frequency Mixer

ZFY-1+

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1)			LO (MHz)	LO VSWR (:1)			IF (OUT) (MHz)	IF VSWR @LO=500.1MHz (:1)		
		@LO (dBm)				@LO (dBm)				@LO (dBm)		
		+20	+23	+26		+20	+23	+26		+20	+23	+26
5.0	35.0	1.70	1.35	1.14	5.0	1.31	1.41	2.36	0.5	1.30	1.31	1.40
10.0	40.0	1.72	1.37	1.14	10.0	1.28	1.45	2.43	0.8	1.23	1.09	1.19
20.1	50.1	1.81	1.58	1.45	20.1	1.23	1.28	1.69	1.0	1.32	1.04	1.10
30.1	60.1	1.93	1.65	1.48	30.1	1.20	1.24	1.53	2.0	1.44	1.11	1.03
40.1	70.1	1.88	1.62	1.47	40.1	1.22	1.22	1.48	3.0	1.44	1.11	1.05
50.1	80.1	1.86	1.61	1.46	50.1	1.24	1.23	1.52	4.0	1.41	1.10	1.06
70.1	100.1	1.93	1.63	1.46	70.1	1.33	1.29	1.71	5.0	1.39	1.08	1.06
90.1	120.1	1.93	1.66	1.49	90.1	1.37	1.31	1.82	6.0	1.38	1.07	1.07
110.1	140.1	1.84	1.60	1.45	110.1	1.34	1.26	1.60	8.0	1.37	1.06	1.07
130.1	160.1	1.99	1.69	1.50	130.1	1.35	1.23	1.46	10.0	1.37	1.05	1.07
150.1	180.1	2.02	1.67	1.47	150.1	1.41	1.22	1.52	15.0	1.37	1.06	1.07
170.1	200.1	1.92	1.62	1.46	170.1	1.46	1.24	1.68	20.0	1.37	1.07	1.07
190.1	220.1	2.01	1.71	1.52	190.1	1.47	1.23	1.58	25.0	1.38	1.08	1.08
220.1	250.1	2.05	1.74	1.56	220.1	1.44	1.13	1.37	30.0	1.38	1.08	1.08
250.1	280.1	2.12	1.77	1.59	250.1	1.55	1.12	1.42	35.0	1.39	1.09	1.09
280.1	310.1	2.09	1.81	1.66	280.1	1.68	1.15	1.38	40.0	1.39	1.10	1.09
340.1	370.1	2.49	2.08	1.89	340.1	1.87	1.23	1.28	45.0	1.41	1.11	1.10
370.1	400.1	2.49	2.15	1.99	370.1	2.21	1.34	1.26	50.0	1.41	1.12	1.10
400.1	430.1	2.70	2.32	2.15	400.1	2.25	1.38	1.19	70.0	1.42	1.14	1.12
450.1	480.1	3.27	2.62	2.37	450.1	2.72	1.52	1.20	90.0	1.44	1.17	1.15
500.1	530.1	3.63	2.92	2.63	500.1	2.62	1.57	1.18	110.0	1.46	1.20	1.18
550.1	580.1	3.94	3.11	2.79	550.1	3.61	1.87	1.37	130.0	1.48	1.22	1.20
600.1	630.1	4.21	3.26	2.88	600.1	2.68	1.71	1.36	150.0	1.50	1.25	1.23
650.1	680.1	4.37	3.28	2.89	650.1	4.31	2.33	1.76	170.0	1.52	1.28	1.25
700.1	730.1	3.91	3.04	2.73	700.1	3.03	1.94	1.64	190.0	1.54	1.30	1.27
800.1	830.1	3.26	2.67	2.44	800.1	3.08	2.10	1.96	210.0	1.55	1.32	1.29
900.1	930.1	2.37	2.11	2.00	900.1	2.89	2.21	2.20	230.0	1.57	1.35	1.31
1000.1	1030.1	1.63	1.60	1.62	1000.1	2.55	2.26	2.37	250.0	1.58	1.36	1.32
1100.1	1130.1	1.60	1.60	1.64	1100.1	2.30	2.36	2.56	270.0	1.59	1.37	1.33
1200.1	1230.1	1.37	1.45	1.51	1200.1	1.79	2.29	2.80	290.0	1.61	1.38	1.34
1300.1	1330.1	1.21	1.35	1.45	1300.1	1.46	2.14	2.88	310.0	1.61	1.38	1.34
1400.1	1430.1	1.10	1.28	1.40	1400.1	1.36	1.88	2.40	330.0	1.60	1.38	1.34
1500.1	1530.1	1.16	1.27	1.37	1500.1	1.40	1.54	1.75	350.0	1.61	1.38	1.33
1600.1	1630.1	1.30	1.33	1.38	1600.1	1.59	1.36	1.39	370.0	1.58	1.36	1.31
1700.1	1730.1	1.59	1.49	1.47	1700.1	1.78	1.35	1.21	390.0	1.58	1.35	1.30
1800.1	1830.1	2.04	1.81	1.70	1800.1	1.94	1.47	1.27	410.0	1.56	1.34	1.28
1900.1	1930.1	2.45	2.12	1.99	1900.1	2.12	1.67	1.53	430.0	1.54	1.31	1.25
2000.1	2030.1	2.65	2.39	2.26	2000.1	2.34	1.97	1.89	450.0	1.52	1.29	1.23
2100.1	2130.1	2.38	2.28	2.22	2100.1	2.36	2.29	2.37	470.0	1.50	1.26	1.19
2200.1	2230.1	1.90	1.94	1.95	2200.1	2.25	2.45	2.69	490.0	1.47	1.23	1.16

REV. X2

ZFY-1+

100818

Page 4 of 5

Harmonics Tables

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	23	36	44	54	47	54	54	52	47	57
1	-	33	+0	61	15	47	28	44	33	47	38	52
2	80	56	52	57	53	55	48	57	52	56	55	58
3	91	48	39	50	50	56	38	59	35	55	39	54
4	107	62	53	61	65	64	77	58	55	57	63	57
5	>119	62	48	61	46	60	44	58	44	58	46	61
6	>122	73	63	70	62	75	60	67	57	63	59	66
7	>121	73	57	74	58	71	60	65	60	60	69	63
8	>122	88	69	85	73	103	66	79	65	75	62	72
9	>122	83	74	80	81	74	75	74	67	73	66	69
10	>121	92	77	106	74	92	75	89	78	89	81	94
RF CAL	0	1	2	3	4	5	6	7	8	9	10	

LO HARMONICS ORDER

Test conditions: RF IN: 250.1 MHz; 15.07.00 dBm.
LO IN: 280.01 MHz; +23.00 dBm
IF OUT: 29.91 MHz; 9.12 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	14	25	26	40	26	35	31	39	40	40
1	-	31	+0	47	17	44	19	40	22	39	26	41
2	90	52	53	56	63	52	45	49	52	47	53	51
3	103	57	57	61	50	64	46	60	47	62	52	61
4	>122	73	66	72	67	72	63	67	66	69	70	66
5	>121	87	79	81	78	83	75	79	73	79	71	83
6	>121	84	84	81	88	85	94	89	87	87	81	85
7	>121	99	97	103	99	108	91	103	88	96	88	96
8	>122	98	96	116	95	103	95	97	92	100	92	102
9	>120	105	101	105	112	108	97	108	95	119	96	114
10	>119	111	116	114	110	109	106	104	110	109	116	113
RF CAL	0	1	2	3	4	5	6	7	8	9	10	

LO HARMONICS ORDER

Test conditions: RF IN: 250.1 MHz; 4.99.00 dBm.
LO IN: 280.01 MHz; +23.00 dBm
IF OUT: 29.91 MHz; -1.02 dBm

- Notes: 1. All Harmonics are in (dBc) relative to IF OUTPUT.
2. + entry denotes harmonics are in (dBc) above IF OUTPUT.
3. RF Cal represent the Harmonics level of the RF input signal to the mixer.

REV. X2
ZFY-1+
100818
Page 5 of 5



Mini-Circuits®

IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS9100 CERTIFIED • RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

The Design Engineers Search Engine finds the model you need, instantly • For detailed performance specs & shopping online see

