

X12 Frequency Multiplier

ZX90-12-63+

50Ω Output 4500 to 6000 MHz

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Input Power	13dBm
DC Voltage	8.5 V

Permanent damage may occur if any of these limits are exceeded.

Coaxial Connections

INPUT	1
OUTPUT	2

Features

- broadband
- excellent spurious and harmonics suppression, 40 dBc typ.

Applications

- military radio
- test equipment
- mobile



CASE STYLE: BY1298

Connectors	Model	Price	Qty.
SMA	ZX90-12-63-S+	\$49.95	(1-9)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

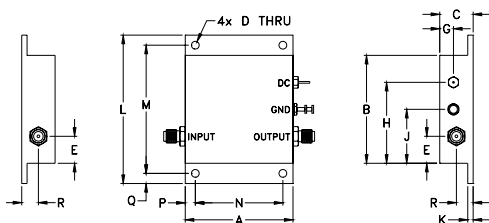
The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications T_{AMB}= 25°C

MULTIPLICATION FACTOR	FREQUENCY (MHz)		INPUT POWER (dBm)		CONVERSION LOSS (dB)		*HARMONIC OUTPUT (dBc)				DC POWER					
	F1 Input	F12 Output	Min.	Max.	F12 Typ.	F12 Max.	F1 to F3 Typ.	F4 Typ.	F5 to F9 Typ.	F10 to F16 Typ.	Volts ¹ (V) Nom.	Current (mA) Max.				
12	375-500	4500-6000	-4	0	6.5	12	65	50	34	23	48	33	26	20	8	200

* Harmonics of input frequency below the power level of F12
1. Other volts available upon request.

Outline Drawing

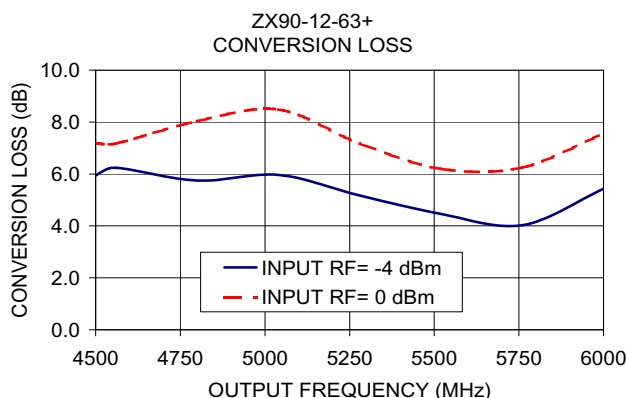


Outline Dimensions (Inch/mm)

A	B	C	D	E	F	G	H	J
2.00	2.00	.62	.144	.50	--	.26	1.50	1.00
50.80	50.80	15.75	3.66	12.70	--	6.60	38.10	25.40
K	L	M	N	P	Q	R	wt	
.100	2.75	2.375	1.625	.19	.19	.31	grams	
2.54	69.85	60.33	41.28	4.83	4.83	7.87	71.80	

Typical Performance Data

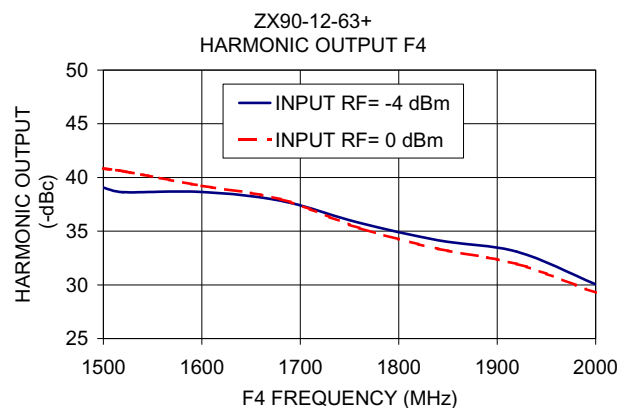
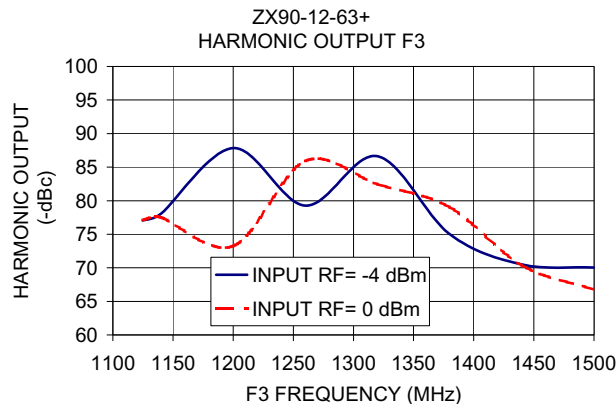
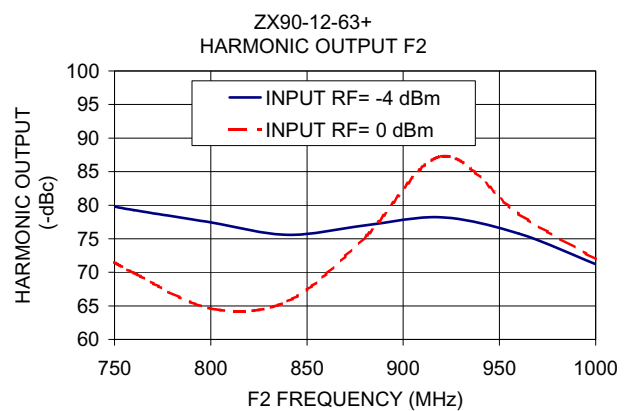
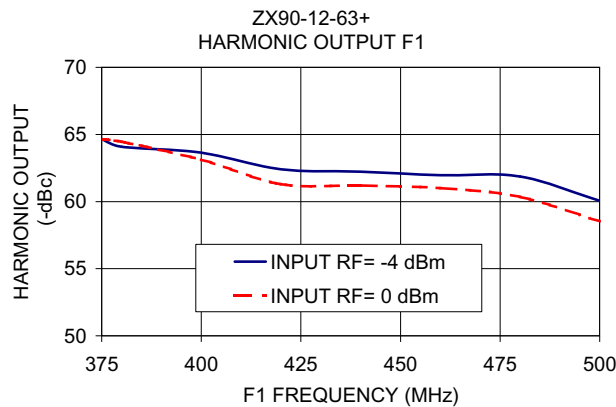
Frequency Input (MHz)	Frequency Output (MHz)	Conversion Loss (dB) at RF Input Power	
		-4 dBm	0 dBm
375.00	4500.00	5.95	7.19
380.00	4560.00	6.24	7.17
400.00	4800.00	5.75	8.03
420.00	5040.00	5.96	8.48
440.00	5280.00	5.17	7.17
460.00	5520.00	4.46	6.20
480.00	5760.00	4.03	6.25
500.00	6000.00	5.43	7.56



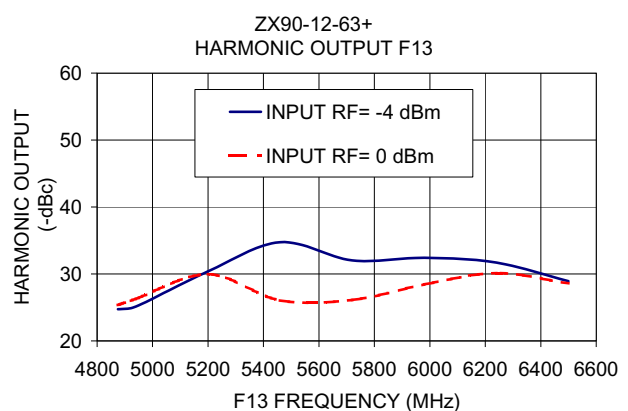
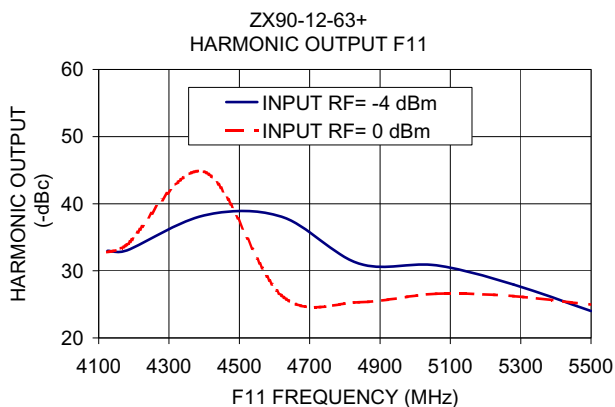
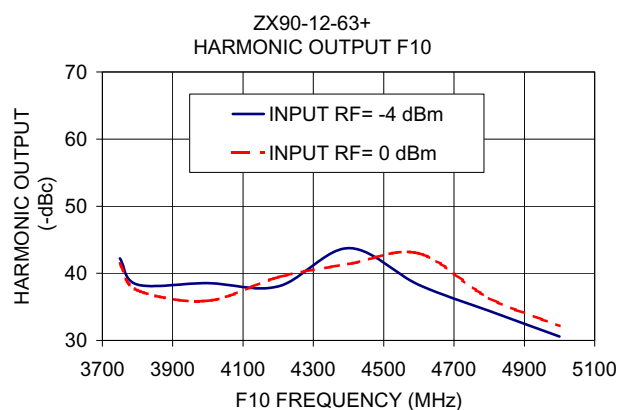
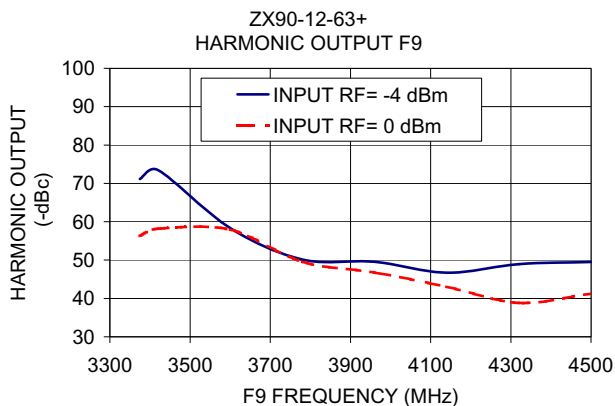
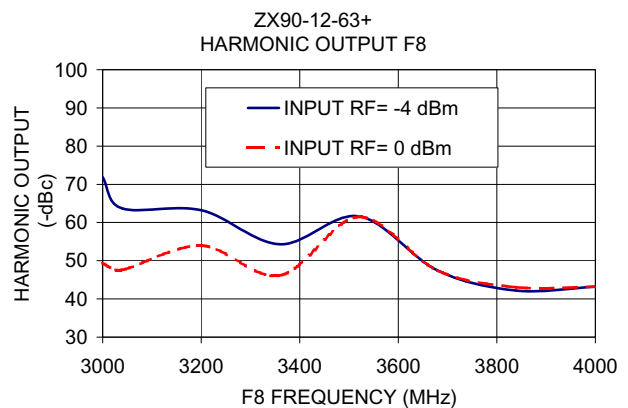
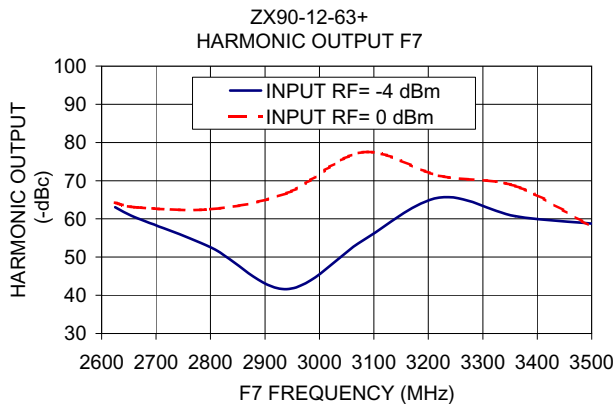
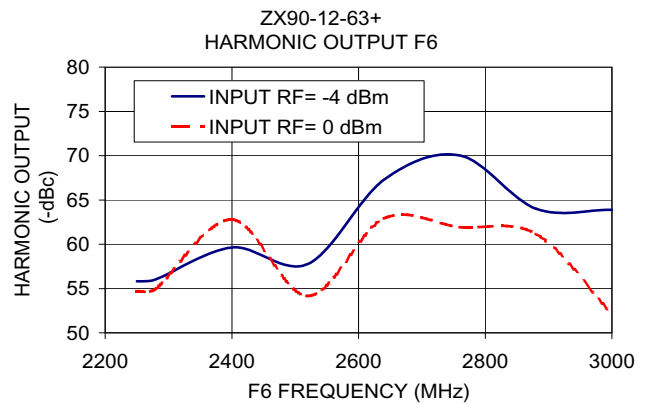
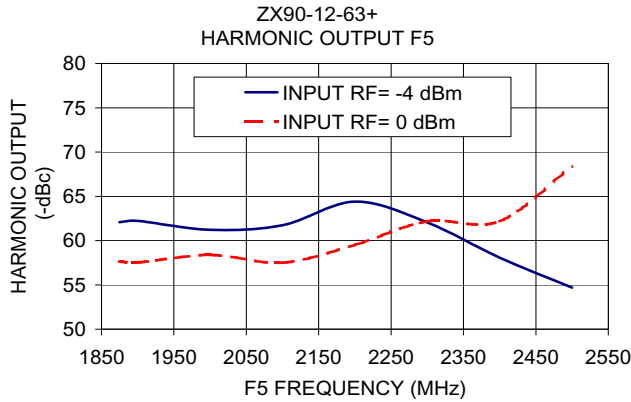
Typical Performance Data

Frequency		Harmonic Rejection Below F12 (-dBc) at RF Input Power -4 dBm															
Input (MHz)	Output (MHz)	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F13	F14	F15	F16	
375.00	4500.00	64.66	79.80	77.05	39.05	62.08	55.81	64.27	71.85	71.12	42.22	32.97	24.73	28.12	48.25	31.03	
380.00	4560.00	64.08	79.28	78.05	38.64	62.22	56.04	63.03	63.68	73.49	38.30	33.03	25.13	28.42	47.76	31.68	
400.00	4800.00	63.64	77.43	87.83	38.65	61.23	59.64	62.54	63.22	58.33	38.54	38.24	30.38	30.61	53.46	30.96	
420.00	5040.00	62.40	75.57	79.26	37.84	61.73	57.78	66.74	54.32	50.14	38.04	38.07	34.73	30.83	50.99	32.06	
440.00	5280.00	62.22	76.98	86.65	35.78	64.41	67.28	77.48	61.62	49.55	43.77	31.07	32.03	53.14	51.43	34.49	
460.00	5520.00	61.96	78.19	75.03	34.15	62.06	70.03	71.28	47.47	46.70	38.28	30.83	32.41	56.21	49.98	46.38	
480.00	5760.00	61.87	75.78	70.51	33.08	58.06	64.02	68.63	42.16	48.94	34.41	27.95	31.70	42.42	57.20	49.95	
500.00	6000.00	60.06	71.20	70.04	30.05	54.70	63.89	58.01	43.20	49.53	30.60	24.01	28.91	38.06	62.56	57.80	

Frequency		Harmonic Rejection Below F12 (-dBc) at RF Input Power 0 dBm															
Input (MHz)	Output (MHz)	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F13	F14	F15	F16	
375.00	4500.00	64.64	71.46	77.11	40.83	57.63	54.72	63.03	49.41	56.29	41.40	32.78	25.37	28.28	45.86	29.60	
380.00	4560.00	64.46	69.90	77.51	40.59	57.54	54.96	60.50	47.64	58.19	37.48	33.89	26.28	28.11	46.11	30.60	
400.00	4800.00	63.12	64.59	73.24	39.23	58.38	62.79	52.58	53.99	57.95	35.91	44.77	29.96	30.64	53.53	31.81	
420.00	5040.00	61.29	65.69	85.91	37.97	57.50	54.15	41.63	46.14	49.55	39.42	26.32	26.03	32.55	49.93	34.58	
440.00	5280.00	61.19	75.16	82.45	35.28	59.51	62.90	54.34	61.47	46.75	41.37	25.32	26.12	53.65	46.65	38.53	
460.00	5520.00	61.01	87.29	79.04	33.35	62.18	61.94	65.60	47.47	43.06	42.98	26.59	28.42	44.73	49.11	50.63	
480.00	5760.00	60.35	78.71	70.37	31.95	62.17	61.17	60.69	43.05	38.82	36.28	26.22	30.12	39.82	52.65	53.32	
500.00	6000.00	58.53	71.98	66.76	29.27	68.41	52.10	58.78	43.19	41.26	32.15	24.96	28.59	39.01	59.79	60.16	



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