

X12 Frequency Multiplier

50Ω Output 4500 to 6000 MHz

ZX90-12-63-S+



Generic photo used for illustration purposes only

CASE STYLE: BY1298

Connectors	Model
SMA	ZX90-12-63-S+

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

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

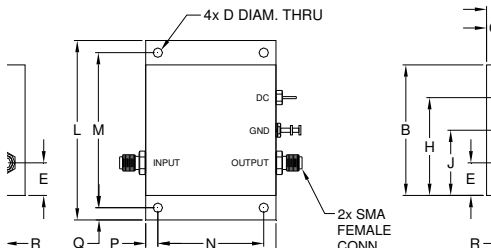
Electrical Specifications T_{AMB}= 25°C

MULTIPLICATION FACTOR	FREQUENCY (MHz)		INPUT POWER (dBm)		CONVERSION LOSS (dB)		*HARMONIC OUTPUT (dBc)				DC POWER					
	F1 Input	F12 Output	Min.	Max.	F12 Typ.	Max.	F1 to F3 Typ.	F4 Min.	F5 to F9 Typ.	F10 to F16 Min.	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



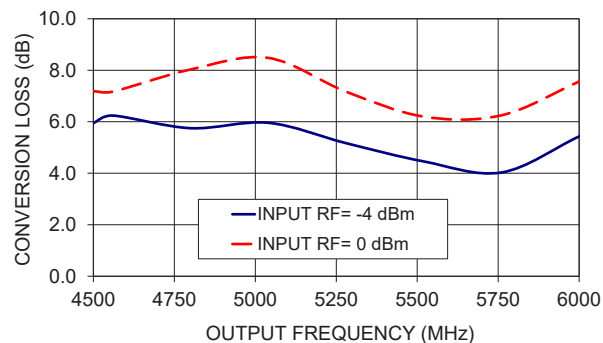
Outline Dimensions (Inch/mm)

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

ZX90-12-63-S+
CONVERSION LOSS



Notes

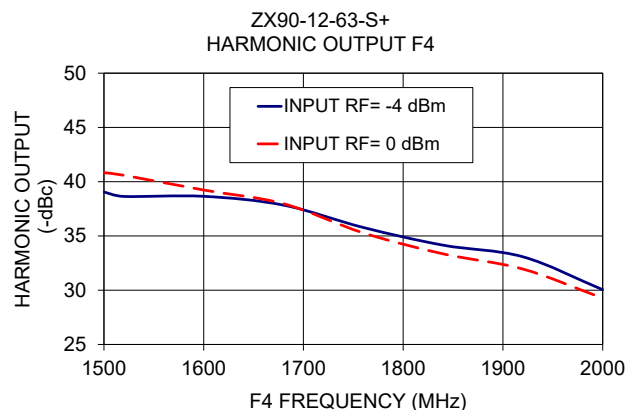
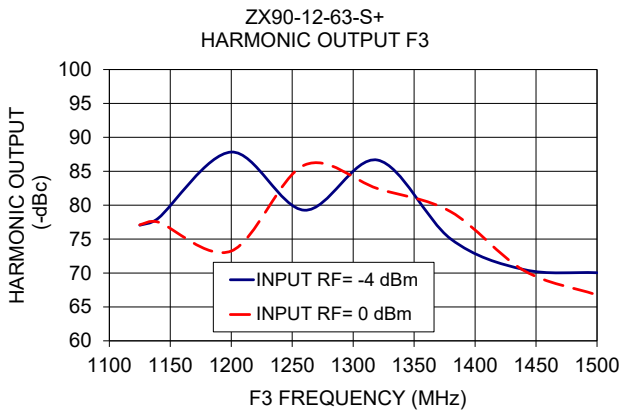
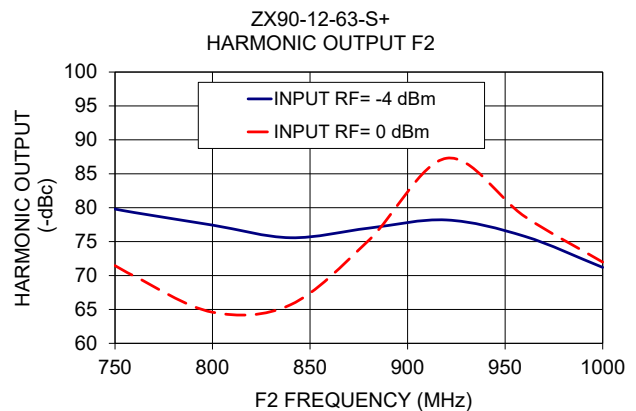
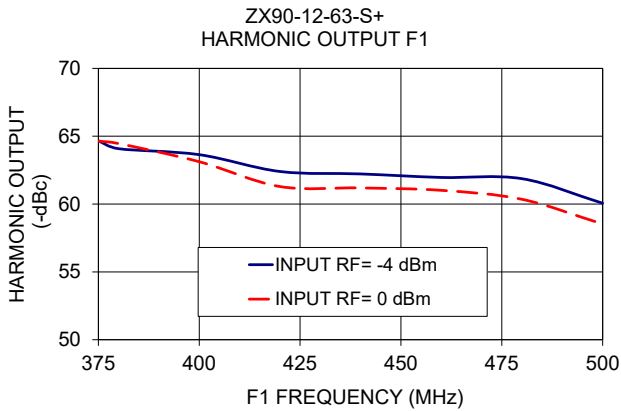
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Typical Performance Data

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	

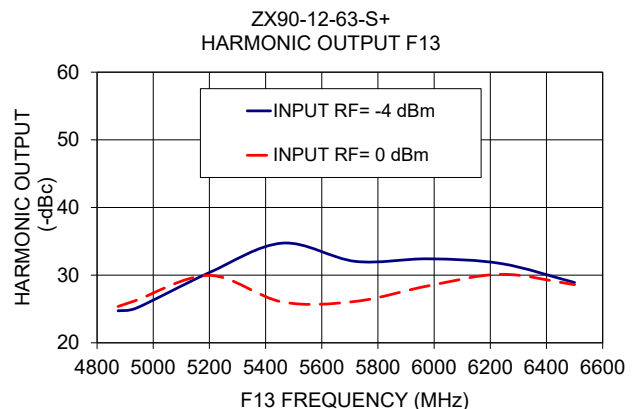
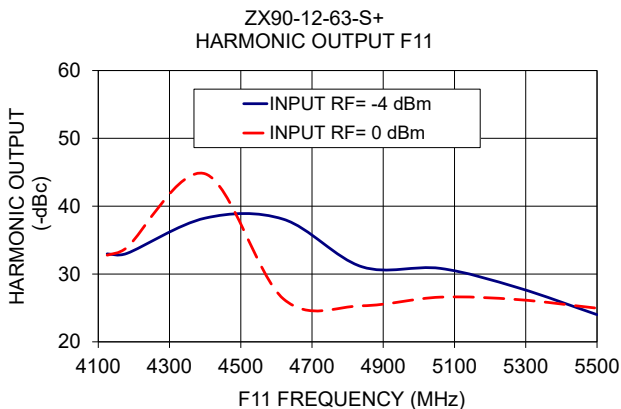
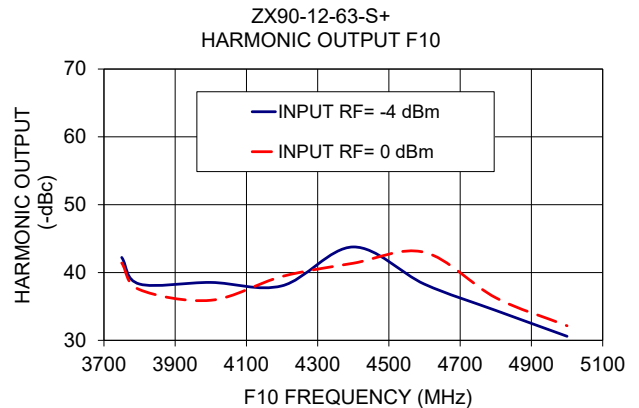
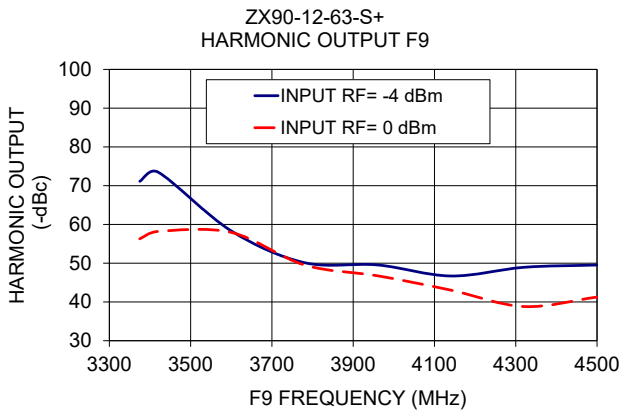
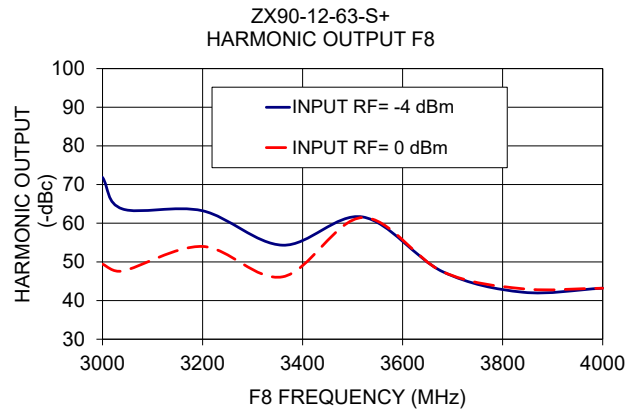
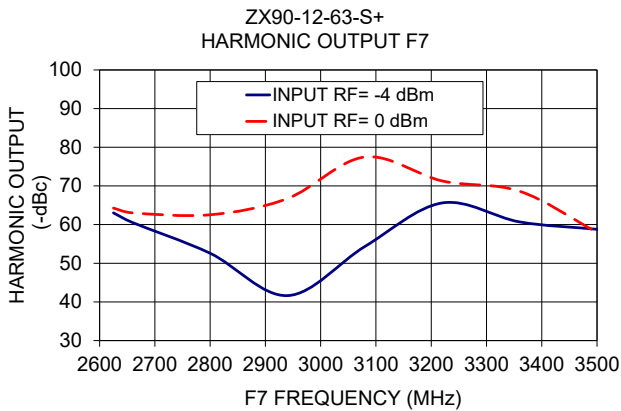
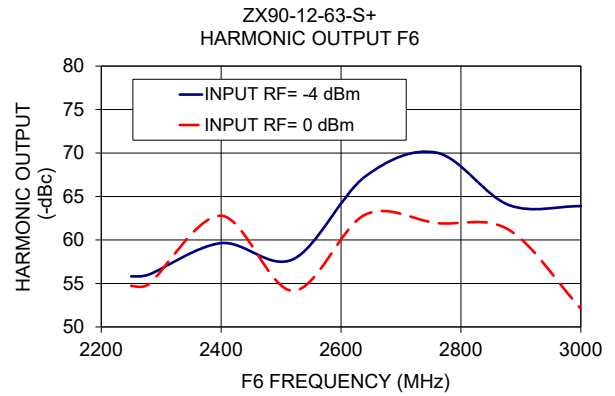
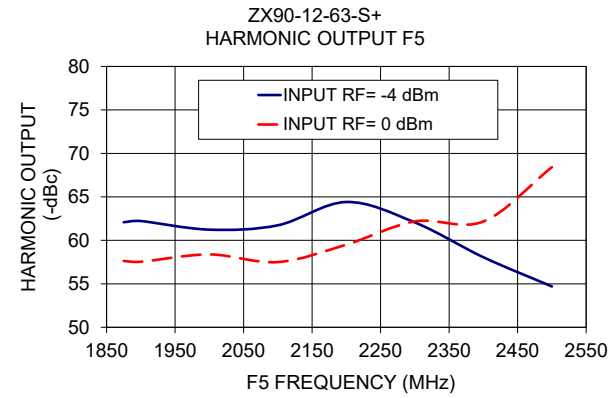
Frequency		Harmonic Rejection Below F12 (-dBc) at RF Input Power 0 dBm															
Input (MHz)	Output (MHz)	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F13	F14	F15	F16	
375.00	4500.00	64.64	71.46	77.11	40.83	57.63	54.72	63.03	49.41	56.29	41.40	32.78	25.37	28.28	45.86	29.60	
380.00	4560.00	64.46	69.90	77.51	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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