farran

Operational Manual

Sub Harmonic Mixer

QUALITY
ISO 9001:2015
NSAI Certified

farran

7. Technical Specifications

Table 1. Sub Harmonic Mixer Specifications

Model	Parameters																		
	Operating Frequency (GHz)		Conv. Loss (dB)		LO Input Frequency (GHz)		IF Range (GHz)		Noise Figure (dBm)			Noise Temp. (K)		LO Drive Level (mW)			RF Con.	LO Con.	IF Con.
	Min	Max	Typ	Max	Min	Max	Min	Max	Min	Typ	Max	Typ	Max	Min	Typ	Max	Typ	Typ	Typ
SPM-15-0001	50	75	6.5	10	25	37.5	0.01	6.5	-	-	-	-	-	7	10	13	WR-15 UG 387/U-M	WR-28 UG 599/U-M	SMA (f)
SPM-12-0001	60	90	7.5	10	30	45	0.01	2	-	-	-	-	-	7	10	13	WR-12 UG 387/U-M	WR-22 UG 383/U-M	SMA (f)
SPM-10-0001	75	110	9	11	37.5	55	0.01	6	-	8	12	-	-	6	7	12	WR-10 UG 387/U-M	WR-19 UG 383/U-M	SMA (f)
SPM-08-0001	90	140	9	12	45	70	0.01	10	-	8	10	-	-	2	4	6	WR-08 UG 387/U-M	WR-15 UG 387/U-M	SMA (f)
SPM-06-0002	110	170	9	13	55	85	0.01	10	4	6	10	865	2610	2	4	6	WR-06 UG 387/U-M	WR-12 UG 387/U-M	SMA (f)
SPM-06-0003	110	170	9	15	55	85	0.01	20	4	6	12	865	4306	2	4	6	WR-06 UG 387/U-M	WR-12 UG 387/U-M	K (f)
SPM-05-0002	140	220	10	15	70	110	0.01	4	-	9	13	-	-	3	5	8	WR-05 UG 387/U-M	WR-10 UG 387/U-M	SMA (f)
SPM-05-0001	172	204	4.5	10	86	102	0.01	7	-	4.4	10	500	2965	2	4	6	WR-05 UG 387/U-M	WR-10 UG 387/U-M	SMA (f)
SPM-04-0001	180	250	5	8.5	90	125	0.01	4	-	5	8.5	600	1500	-	4	6	WR-04 UG 387/U-M	WR-08 UG 387/U-M	SMA (f)
SPM-03-0001	260	300	11	14	130	150	0.01	4	-	8	11	1540	3360	-	4	6	WR-03 UG 387/U-M	WR-06 UG 387/U-M	SMA (f)

Note:

. Conv. Loss - Conversion loss

. LO - Local oscillator

. Min - Minimum

. Typ - Typical

. Max - Maximum

. Noise Temp - Noise temperature

. RF Con - RF waveguide connector

. LO - Local oscillator waveguide connector

. IF Con. - Intermediate frequency connector

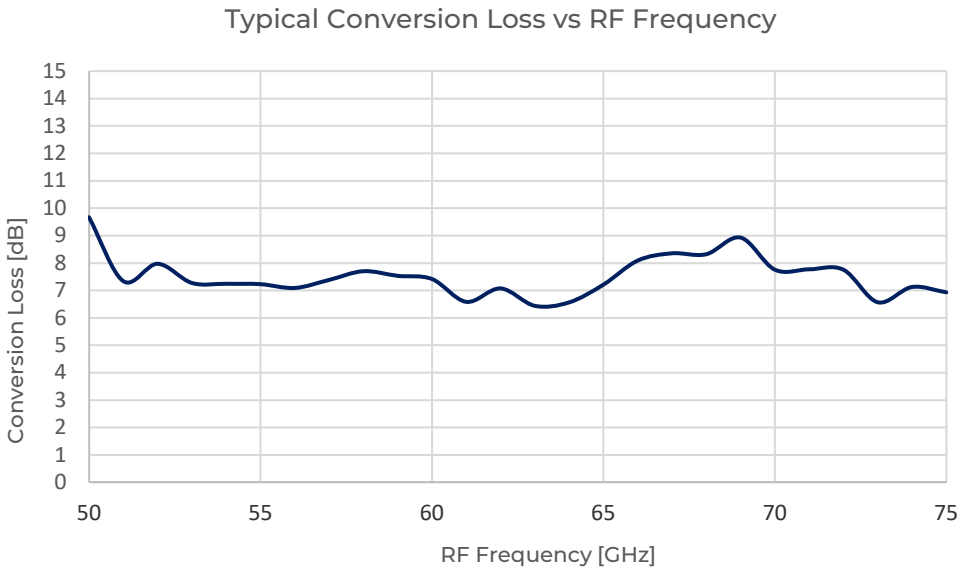
Specification Definitions

Nominal value (nom.) – ensured by design, not tested. **Measured value (min, max)** – expected and warranted product performance obtained from the actual measurements of product sample. **Non-traceable measured value (n. trc. meas.)** – expected product performance obtained from the actual measurements of a product sample by means of using Farran's own equipment and methods. Traceable only to Farran laboratory equipment. **Typical data (typ.)** – value that represents the product specification met over 90% of bandwidth or a mean value. **Specifications without limits** – represent the warranted product performance; with values of no or a negligible deviation from the given value and as such have a secondary impact on the product performance.

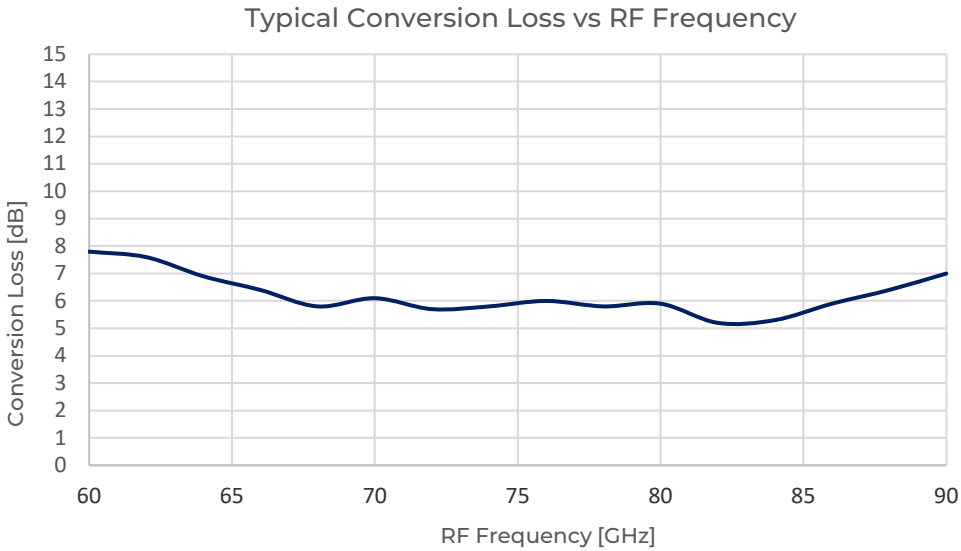
8. Typical Performance

Farran's Sub Harmonic Mixer perfomance plots are provided in this section, for all models. Unless otherwise stated, all perfomance data furnished here has been obtained from in-house measurements, at room temperature.

8.1 SPM-15-0001

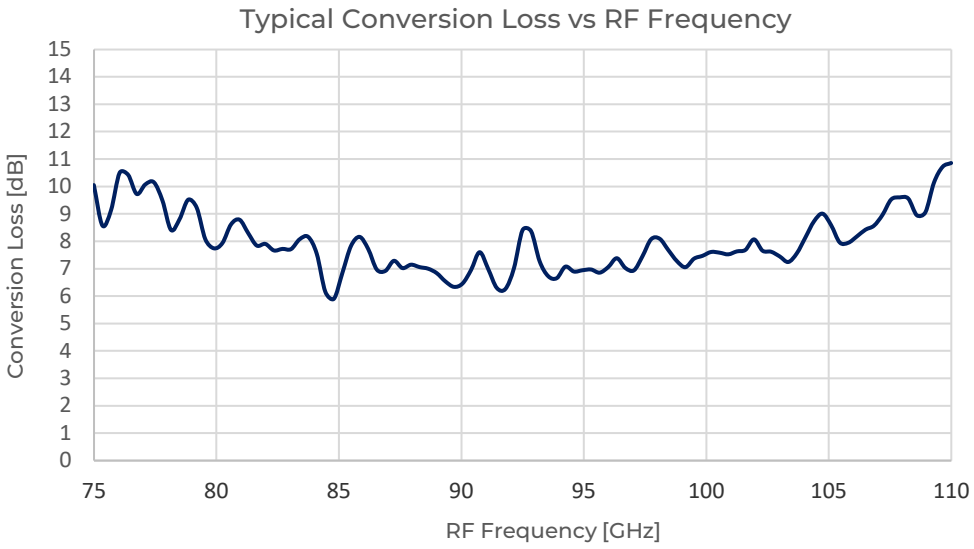


8.2 SPM-12-0001

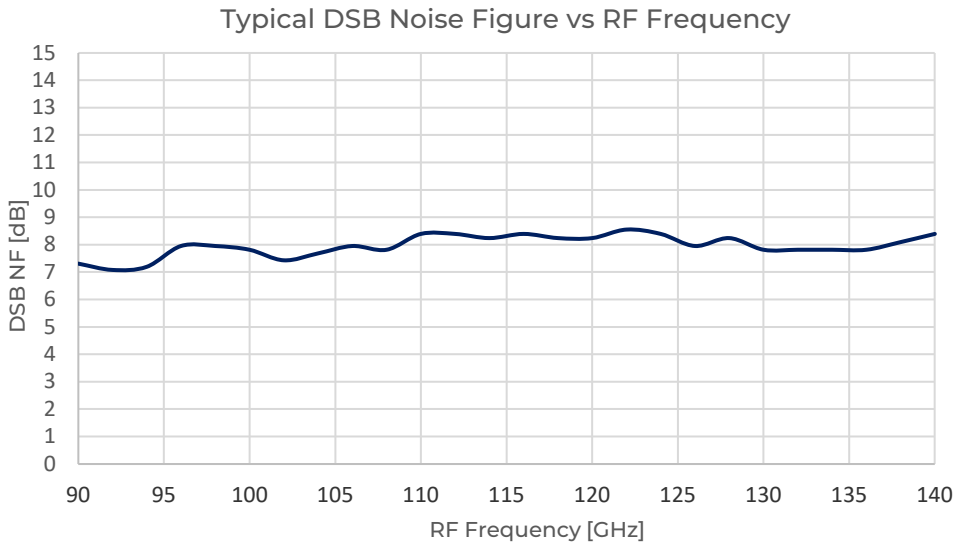


8. Typical Performance

8.3 SPM-10-0001

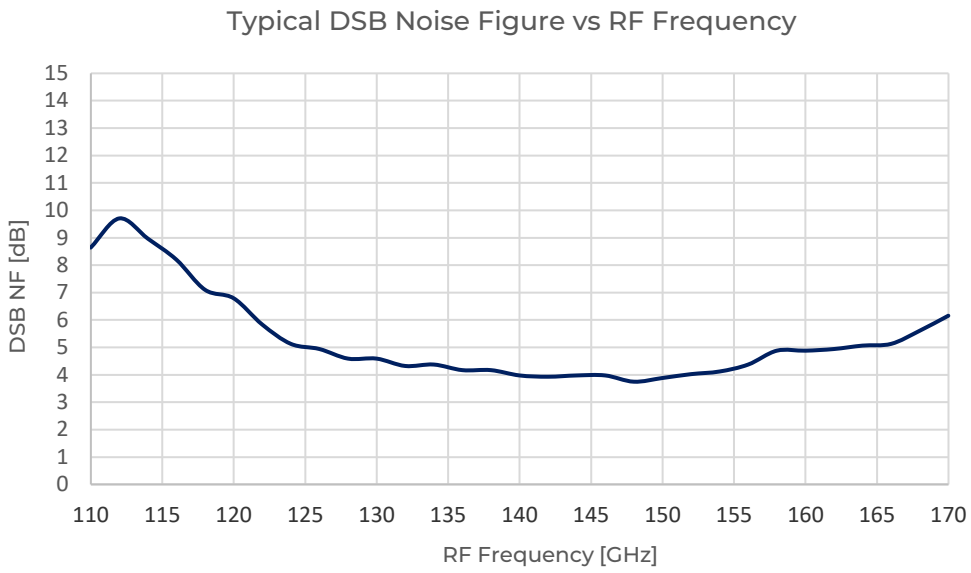


8.4 SPM-08-0001

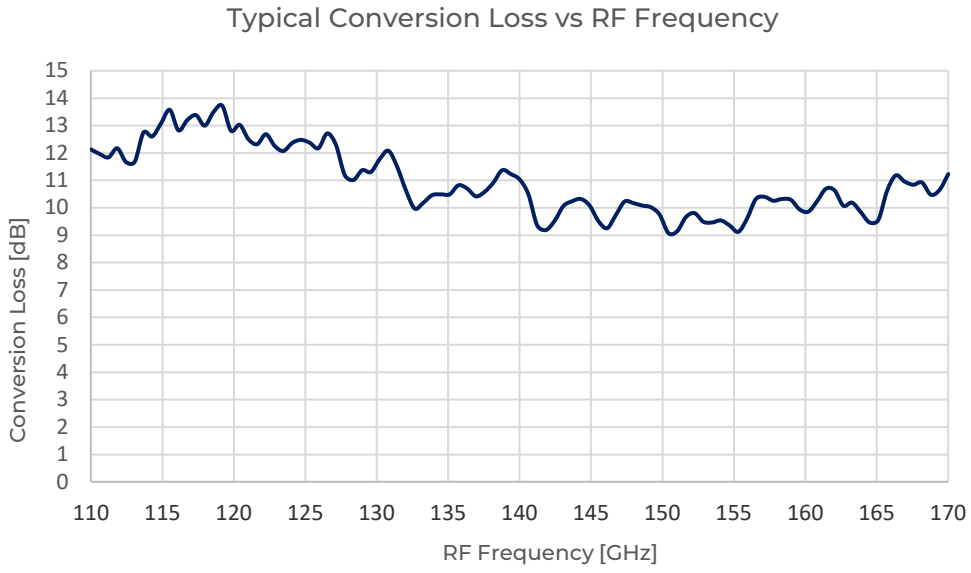


8. Typical Performance

8.5 SPM-06-0002

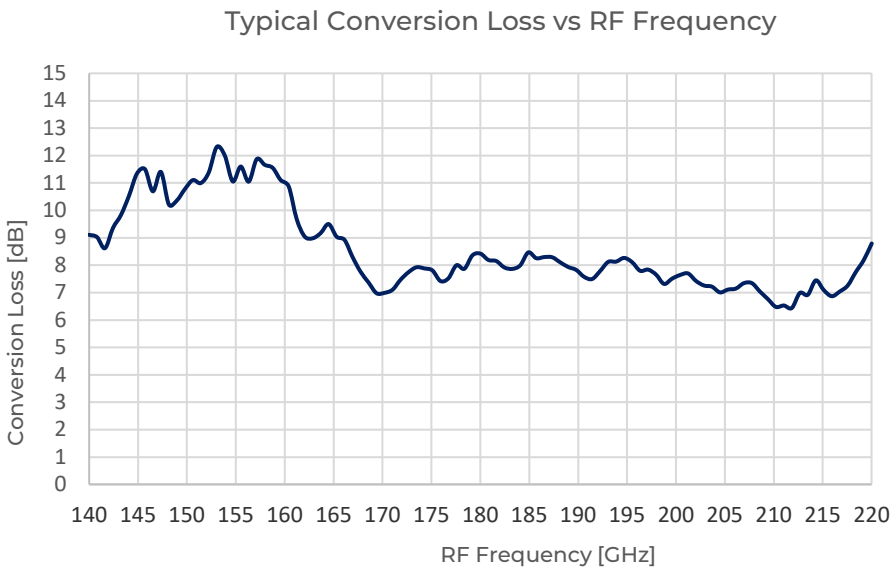


8.6 SPM-06-0003

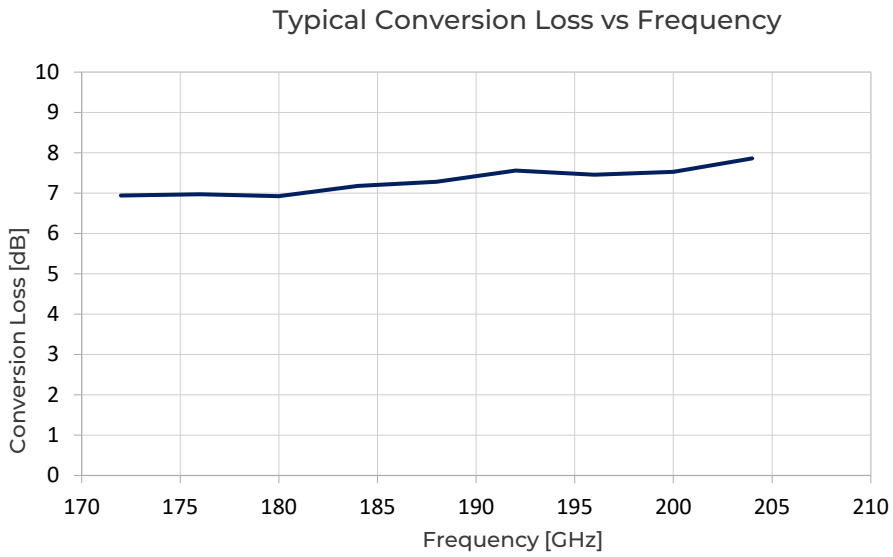


8. Typical Performance

8.7 SPM-05-0002

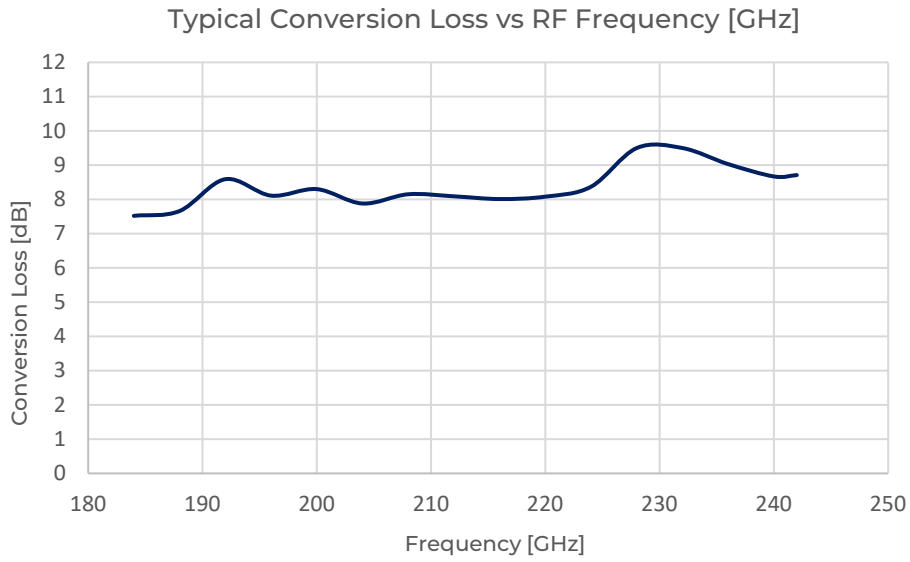


8.8 SPM-05-0001

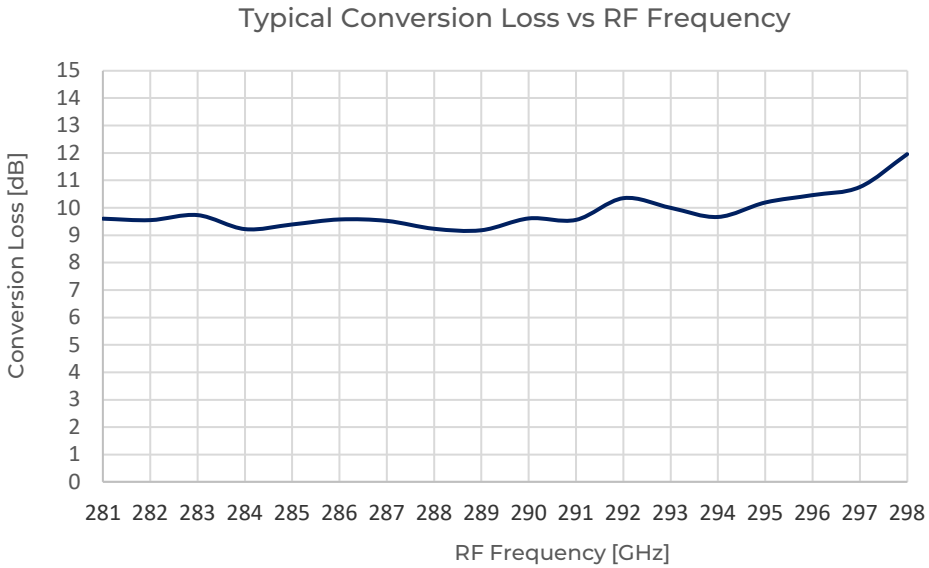


8. Typical Performance

8.9 SPM-04-0001



8.10 SPM-03-0001



farran

12. Appendices

12.1 Drawings

SPM-15-0001