



farran

Operational Manual

Passive Frequency Multiplier





7. Technical Specifications

Table 1. Passive Frequency Multiplier Specifications

Model	Parameters													
	Output Frequency (GHz)		X Factor (nom)	Input Frequency (GHz)		P _{in} (dBm)			P _{out} (dBm)			Efficiency (%)	Input Port Type	Output Port Type
	Min	Max	Typ	Min	Max	Min	Typ	Max	Min	Typ	Max	Typ	Typ	Typ
FD-22-0001	30	50	2	15	25	18	21	23	-	10	-	9	K(f)	WR-22 UG383/U
FD-19-0001	35	60	2	17.5	30	18	21	23	-	10	-	9	K(f)	WR-19 UG383/U
FD-15-0001	45	80	2	22.5	40	18	-	23	-	10	-	9	K(f)	WR-15 UG385/U
FT-12-0001	55	95	3	18.33	31.67	18	21	23	-	7	-	3	K(f)	WR-12 UG387/UM
FT-12-0002	65	100	3	21.66	33.33	18	21	23	-	7	-	3	K(f)	Custom 1.7x1.35mm UG387/UM
FT-10-0002	75	110	3	25	36.67	18	21	23	-	5	-	2.5	K(f)	WR-10 UG387/UM
FD-10-0002	75	110	2	37.5	55	18	20	23	-	6	-	4	WR-19 UG383/UM	WR-10 UG387/UM
FT-08-0001	90	140	3	30	46.67	9	11	13	-	-7	-	2.5	WR-22 UG383/U	WR-08 UG387/UM
FT-06-0001	110	170	3	36.66	56.67	9	11	13	-	-6	-	2.5	WR-19 UG383/U	WR-06 UG387/UM
FT-05-0003	140	220	3	46.66	73.33	9	11	13	-	-6	-	2.5	WR-15 UG385/UM	WR-05 UG387/UM
FT-03-0001	220	325	3	78.33	108.33	9	11	13	-	-8	-	2	WR-10 UG387/UM	WR-03 UG387/UM
FQ-02-0001	325	500	5	65	100	9	11	13	-	-20	-	0.2	WR-12 UG387/UM	WR-02 1785 UG387/UM

Note:

- . Min - Minimum
- . Typ - Typical
- . Max - Maximum
- . X Factor - Frequency multiplier factor
- . P_{in} - Input power
- . P_{out} - Output power

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.

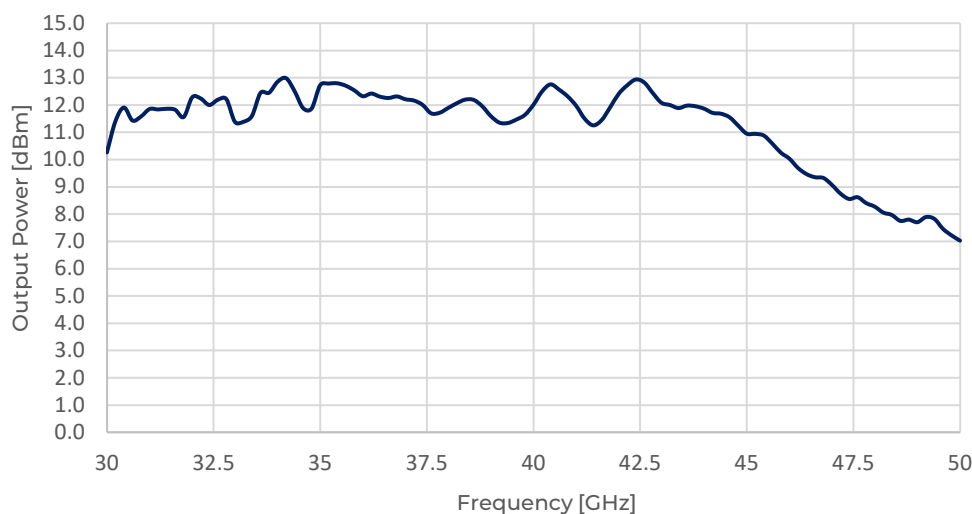


8. Typical Performance

Farran's Passive Frequency Multiplier performance plots are provided in this section, for all models. Unless otherwise stated, all performance data furnished here has been obtained from in-house measurements and at room temperature.

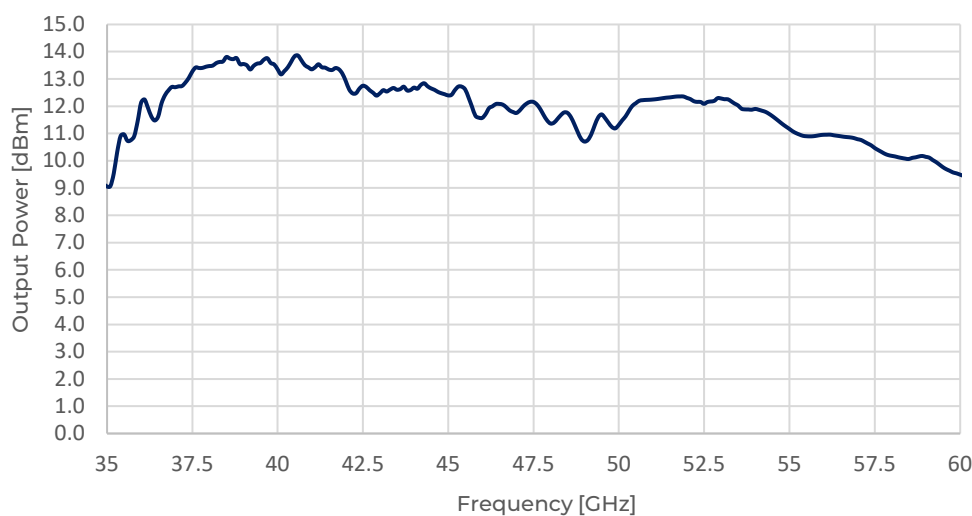
8.1 FD-22-0001

Output Power vs Frequency



8.2 FD-19-0001

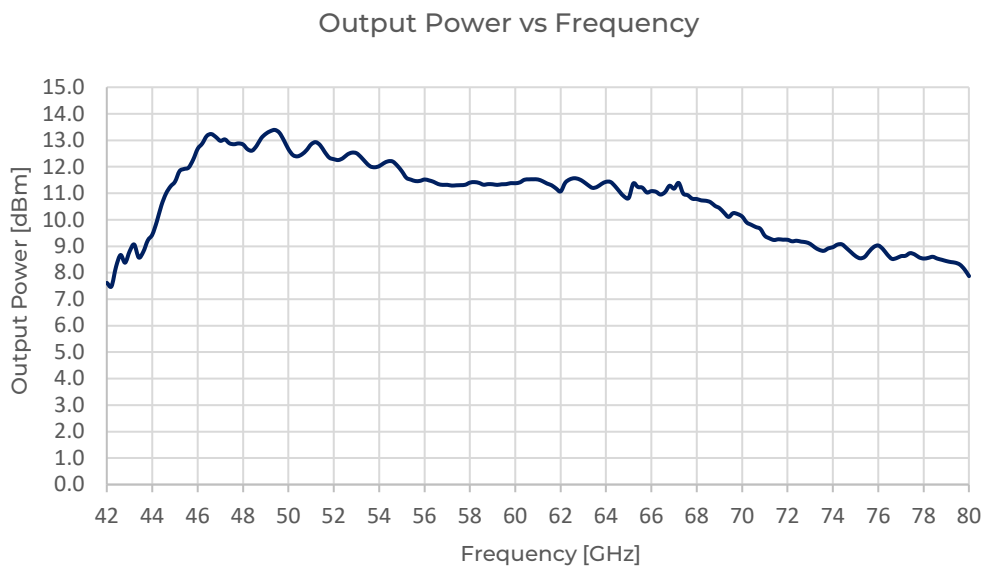
Output Power vs Frequency



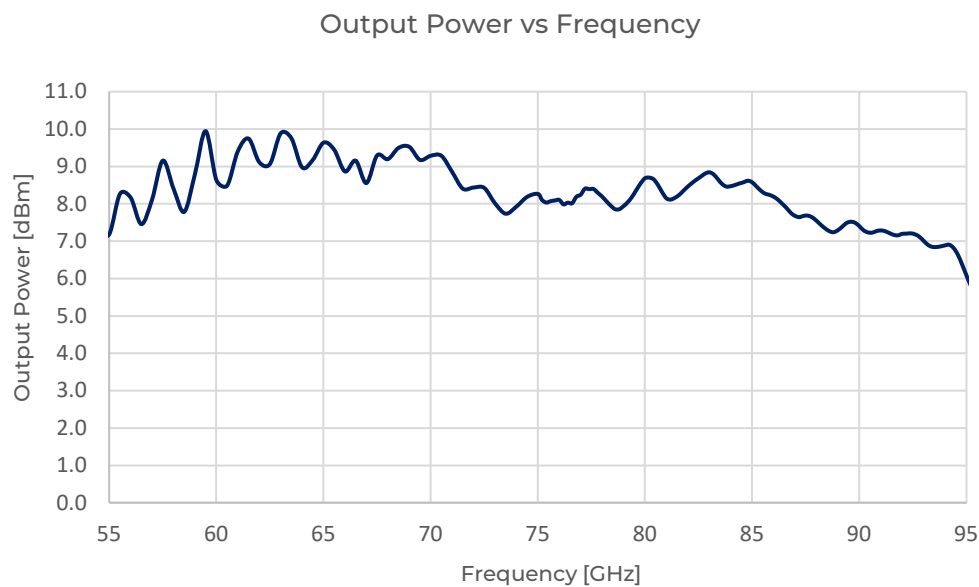


8. Typical Performance

8.3 FD-15-0001



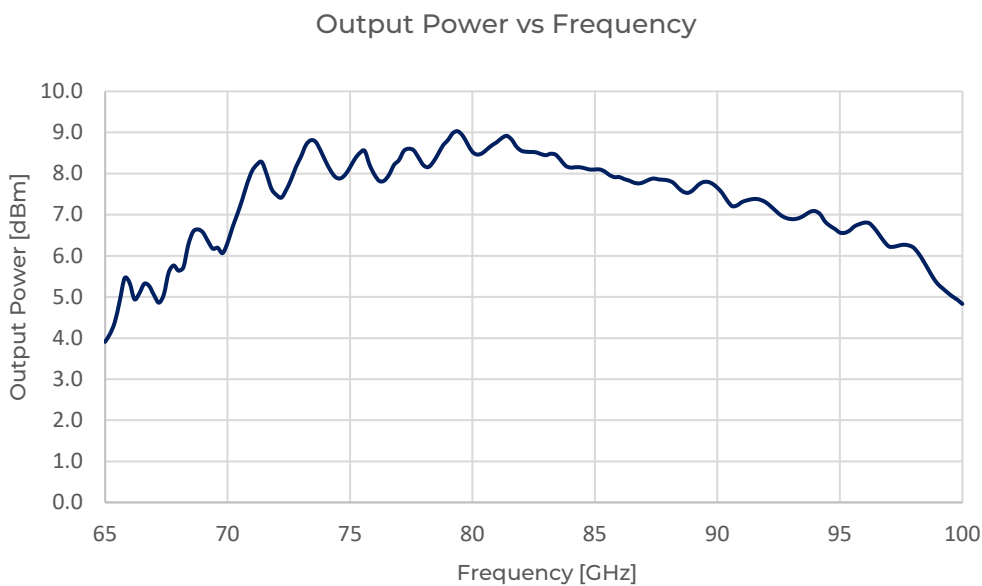
8.4 FT-12-0001



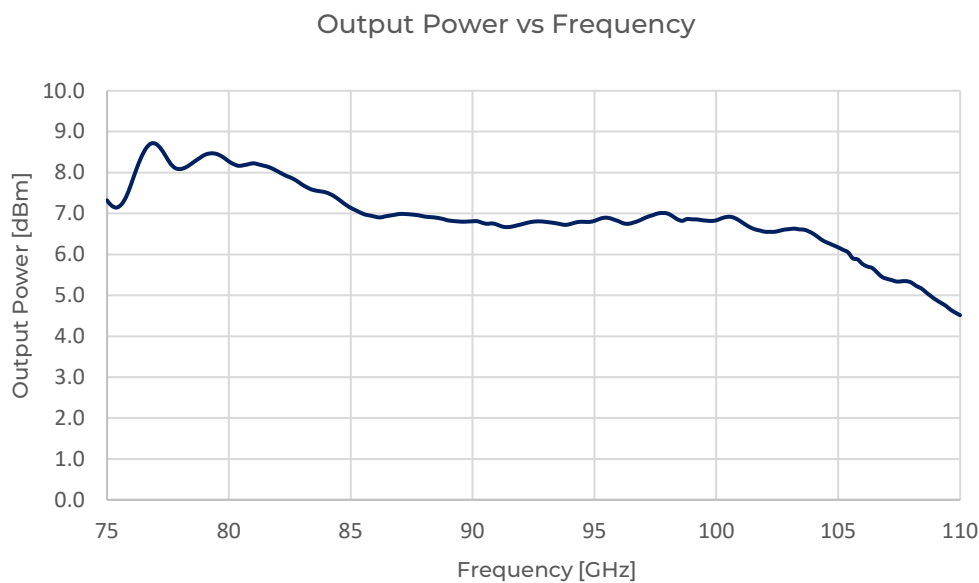


8. Typical Performance

8.5 FT-12-0002



8.6 FT-10-0002

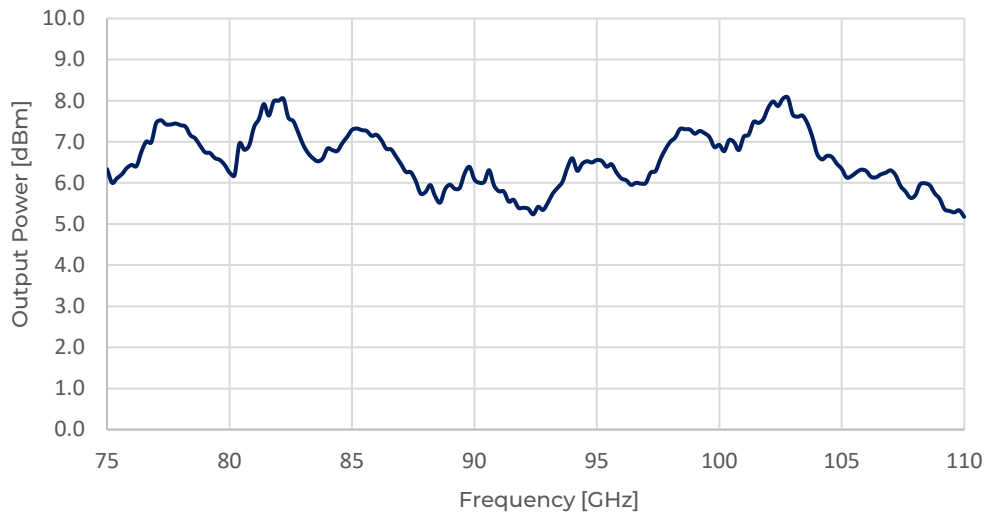




8. Typical Performance

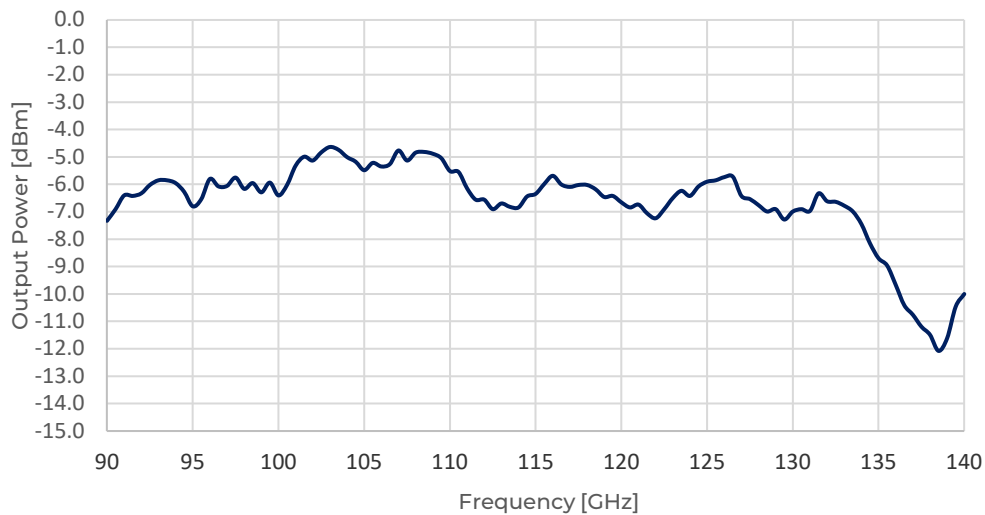
8.7 FD-10-0002

Output Power vs Frequency



8.8 FT-08-0001

Output Power vs Frequency

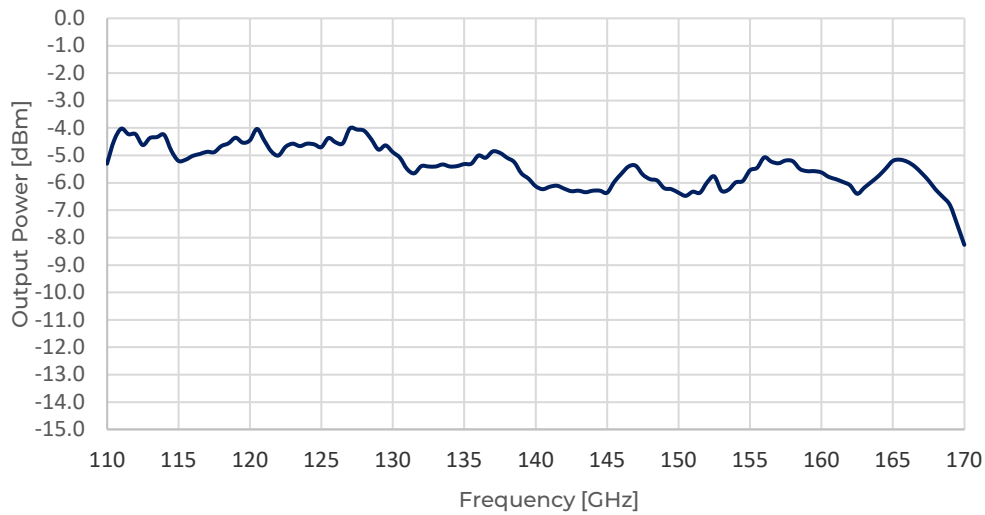




8. Typical Performance

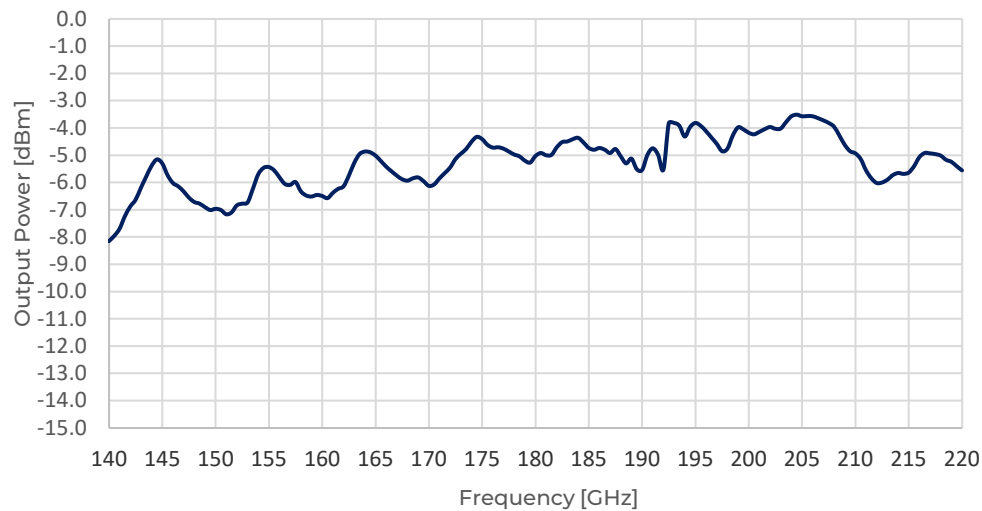
8.9 FT-06-0001

Output Power vs Frequency



8.10 FT-05-0003

Output Power vs Frequency

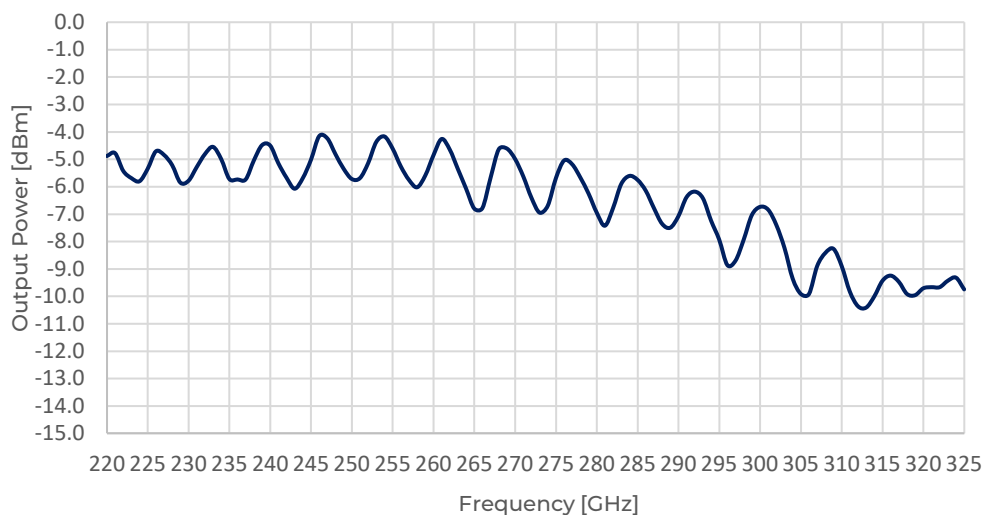




8. Typical Performance

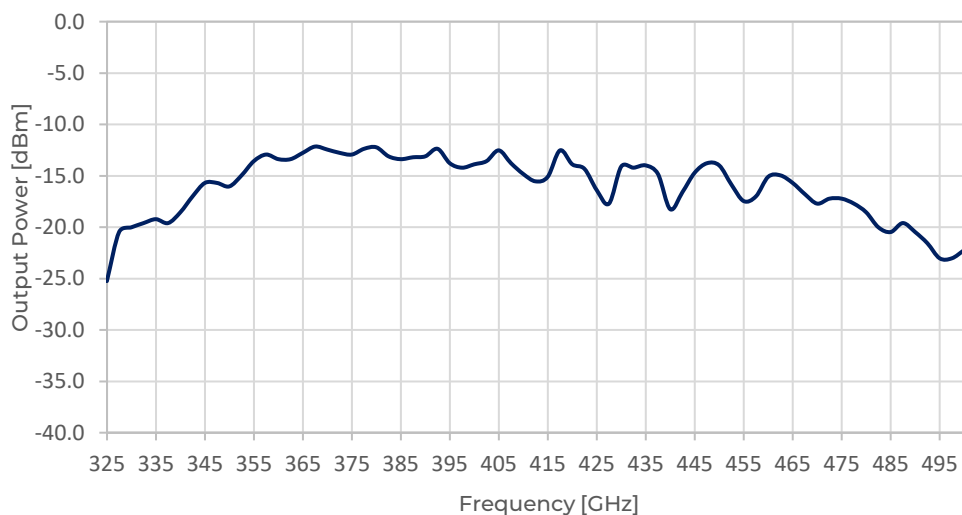
8.11 FT-03-0001

Output Power vs Frequency



8.12 FQ-02-0001

Output Power vs Frequency





12. Appendices

12.1 Drawings



FD-22-0001

