



# farran

## Operational Manual

### Active Frequency Multiplier





## 7. Technical Specifications

Table 1. Active Frequency Multiplier Specifications

Model	Parameters																	
	Output Frequency (GHz)		X Factor (nom)	Input Frequency (GHz)		P <sub>in</sub> (dBm)			P <sub>out</sub> (dBm)			Harmonic Level (dBc)		DC Requirements (V/mA)			Input Port Type	Output Port Type
	Min	Max	Typ	Min	Max	Min	Typ	Max	Min	Typ	Max	Typ	Max	Min	Typ	Max	Typ	Typ
FDA-K-0004	15	33	2	7.5	16.5	-	3	10	23	25	-	-	-35	-/-	6/750	-/-	K(f)	K(f)
FDA-K-0003	18	33	2	9	16.51	-	5	10	-	24	26	-30	20	6/-	-/800	12/1000	K(f)	K(f)
FQA-V-0001	18	50	4	4.5	12.5	-	5	10	10	15	-	-15	-	6/-	-/500	12/650	SMA(f)	1.85mm (f)
FDA-K-0005	20	40	2	10	20	3	-	10	21	24	-	-25	-	-	6/1000	-	2.92mm K(f)	2.92mm K(f)
FXA-19-0001	40	60	4	10	15	7	-	12	7	11	-	-30	-	-/-	6/850	-/-	SMA(f)	WR-19 UG385/UM
FXA-15-0003	50	75	4	12.5	18.75	7	11	-	5	8	-	-	30	-/-	6/800	-/-	SMA(f)	WR-15 UG385/U
FXA-12-0003	60	90	6	10	15	-	3	9	3	-	8	-20	-	-/-	6/800	-/-	K(f)	WR-12 UG387/U
FXA-12-0001	72	82.5	8	9	10.25	-	10	13	-	13	-	-40	20	6/-	-/720	12/850	K(f)	WR-12 UG387/U
FXA-10-0001	75	110	6	12.5	18.33	3	5	8	3	7	9	-30	-	5.5/800	6/860	8/900	SMA(f)	WR-10 UG387/UM
FXA-10-0002	75	110	6	12.5	18.33	-	-	-	0	7	10	-30	-	-/-	6/1000	-/-	SMA(f)	WR-10 UG387/UM

### Note:

- . Min - Minimum
- . Typ - Typical
- . Max - Maximum
- . X Factor - Frequency multiplier factor
- . P<sub>in</sub> - Input power
- . P<sub>out</sub> - 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.

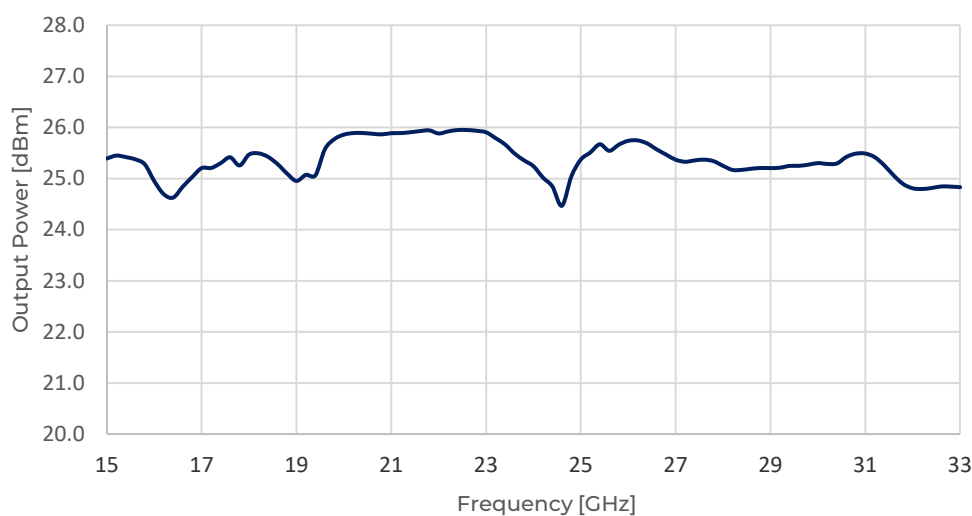


## 8. Typical Performance

Farran's Active 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, at room temperature.

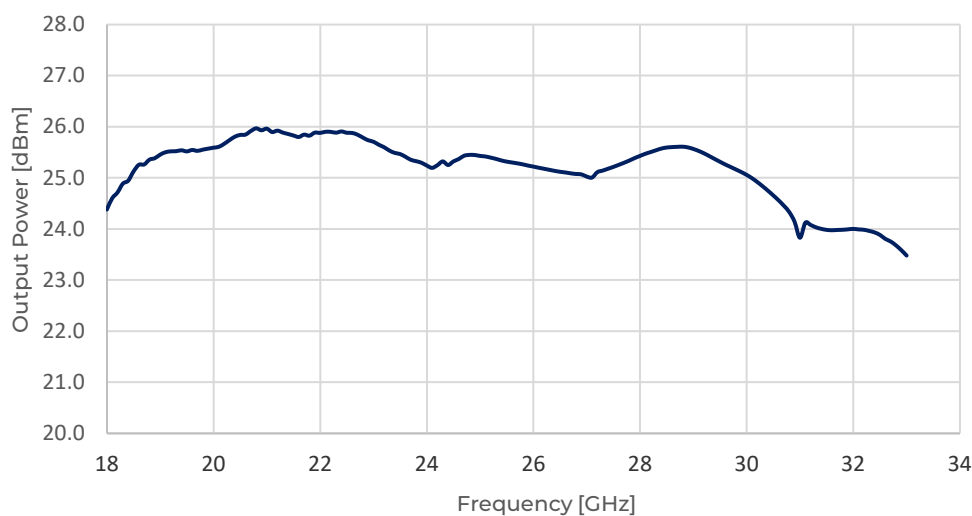
### 8.1 FDA-K-0004

Output Power vs Frequency



### 8.2 FDA-K-0003

Output Power vs Frequency

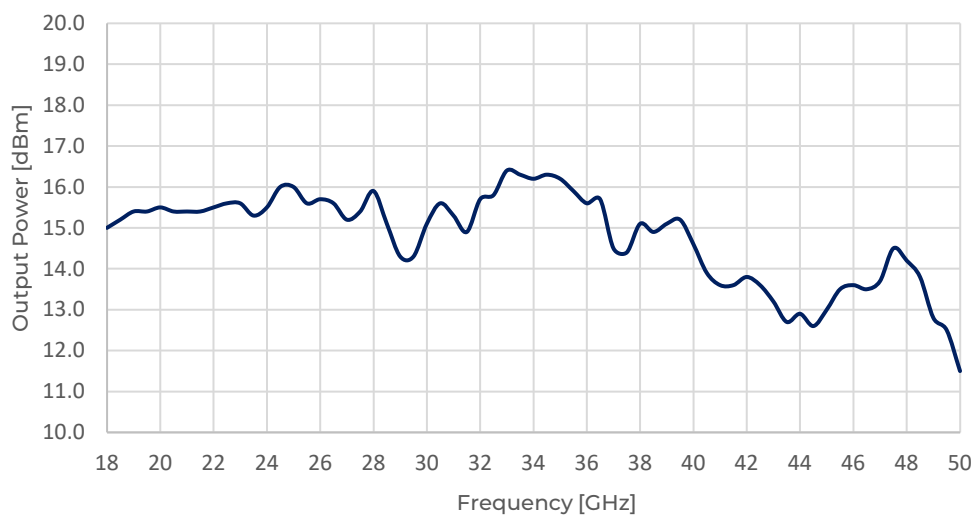




## 8. Typical Performance

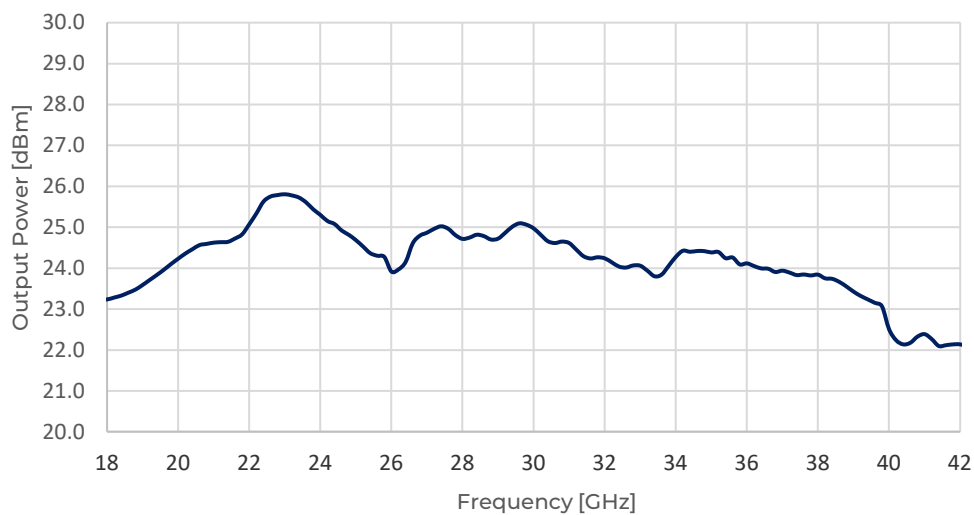
### 8.3 FQA-V-0001

Output Power vs Frequency



### 8.4 FDA-K-0005

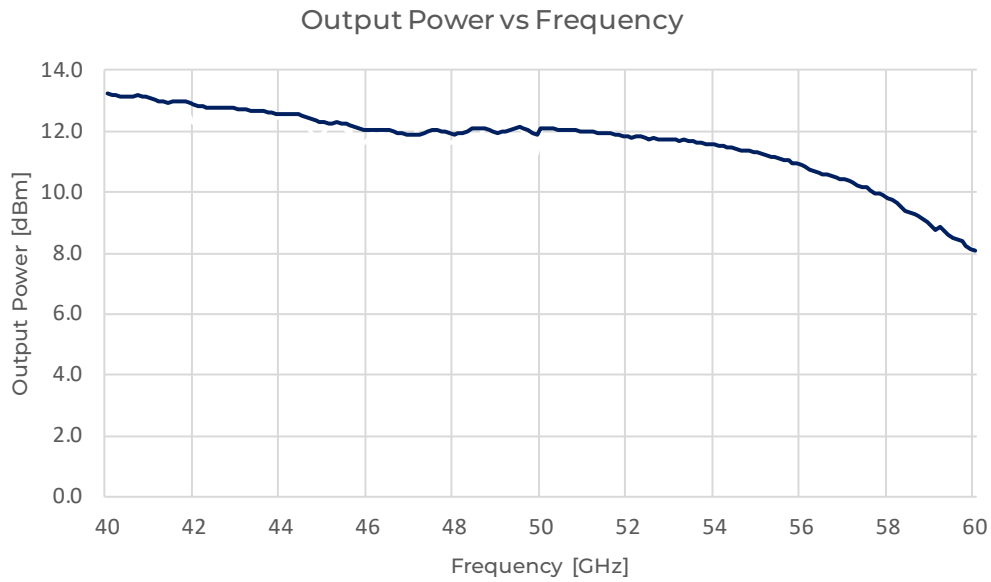
Output Power vs Frequency



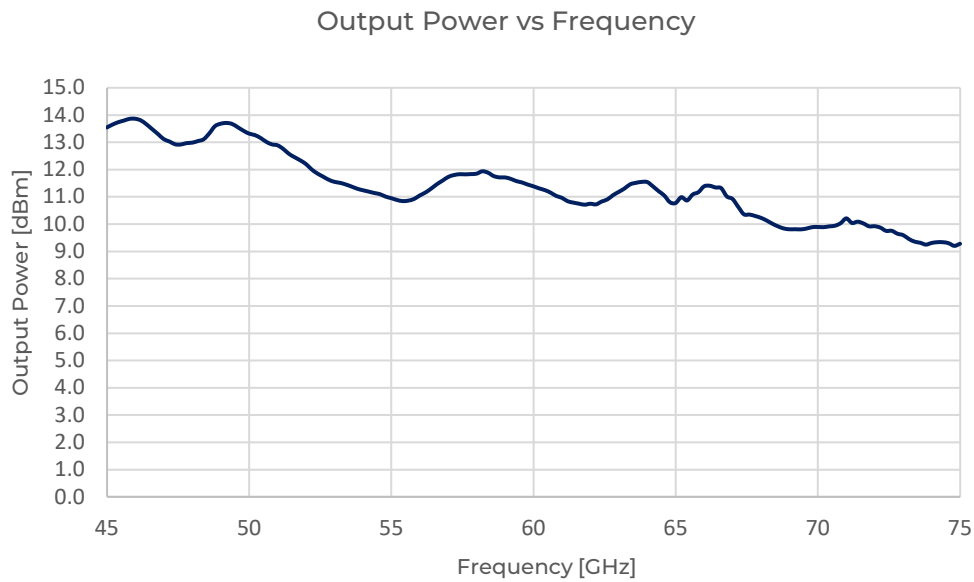


## 8. Typical Performance

### 8.5 FXA-19-0001



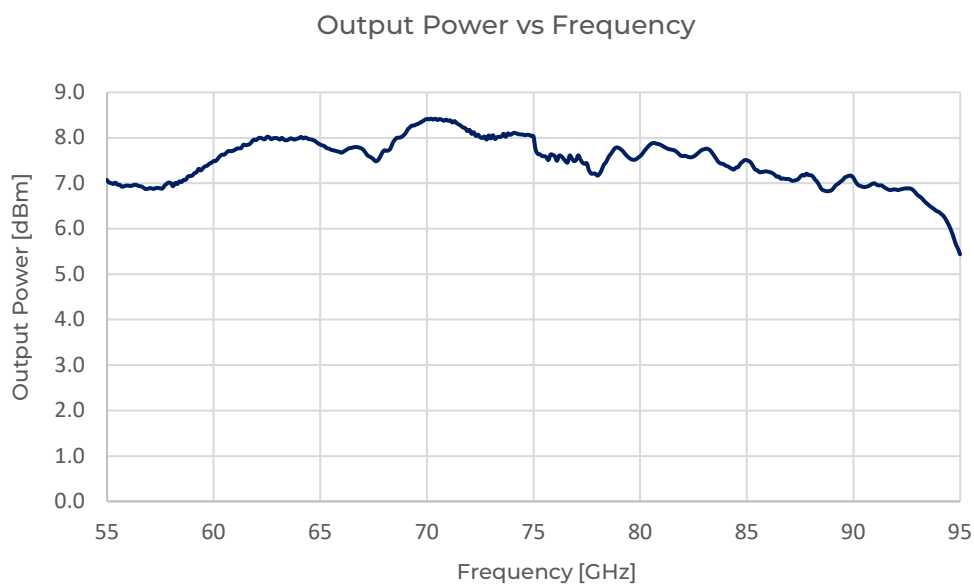
### 8.6 FXA-15-0003



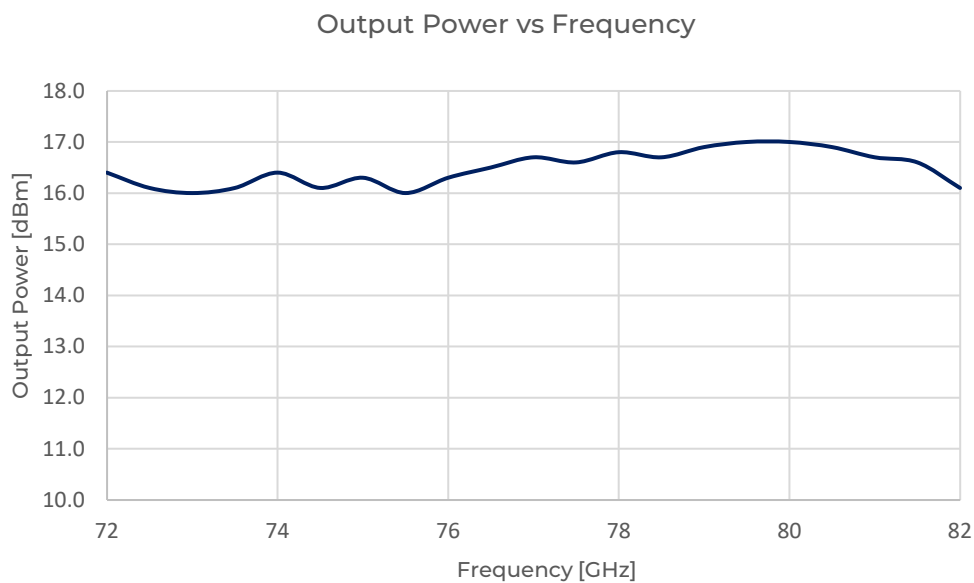


## 8. Typical Performance

### 8.7 FXA-12-0003



### 8.8 FXA-12-0001

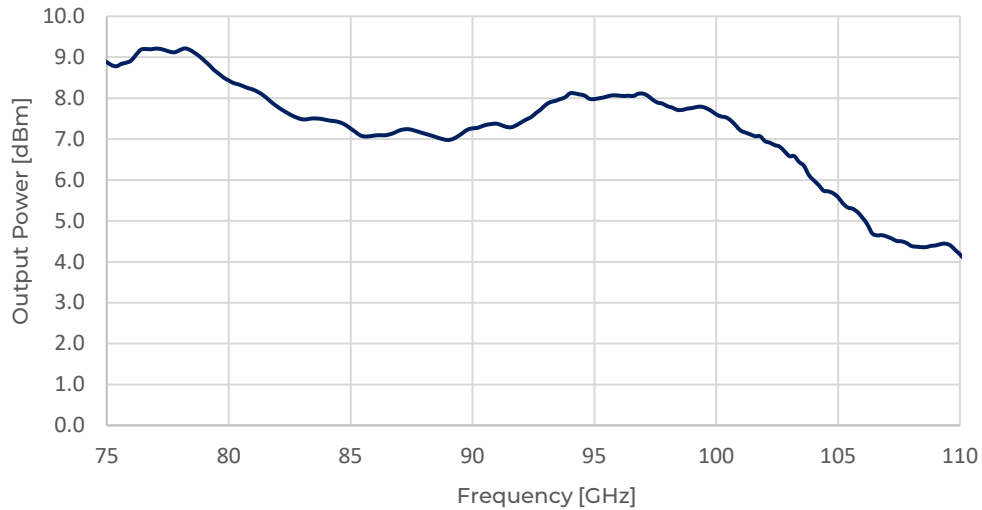




## 8. Typical Performance

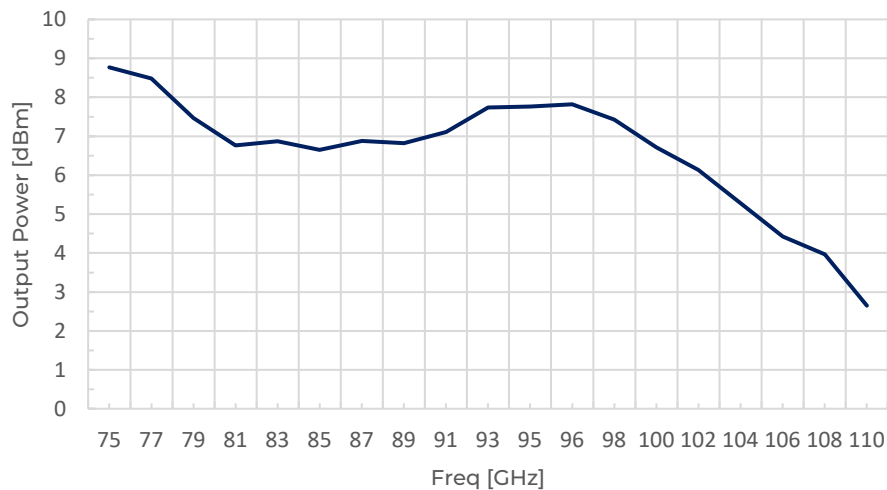
### 8.9 FXA-10-0001

Output Power vs Frequency



### 8.10 FXA-10-0002

Output Power vs Frequency



# 12. Appendices

## 12.1 Drawings

FDA-K-0004

