Blade Antennas

BLADE ANTENNAS:

The Haigh-Farr family of rugged Blade antennas is available in frequencies ranging from UHF to upper C-band. Since 1972, our blade antennas have a demonstrated reliability of use in high-performance airborne applications. In addition, they are used extensively in ground-based vehicles such as race cars, trucks, tanks, and motorcycles, to name a few.

60XX & 61XX Series: Our 60XX & 61XX Series blade antennas have quasi-uniform null-free hemispherical gain patterns and may be provided in either straight or rounded blade configurations. 60XX and 61XX Series blade antennas are available in standard and high powered versions. With sufficient airflow, our standard blades handle an average power of 25 - 30W CW and our High Powered blades can handle an average power of 80W CW. These blade antennas share a common footprint with varying height.

Multiband: Haigh-Farr Multiband blade antennas utilize identical materials and construction as our 60XX & 61XX series blade antennas with additional bandwidth.

UHF: Haigh-Farr UHF blade antennas provide coverage down to 380 MHz and up to 470 MHz in two unique form factors. Our 6300-X series of blade antennas utilize identical materials and construction as our 60XX & 61XX series blade antennas in the larger blade structure required at UHF-band. Our P/N's 16230-XXX and 16400-XXX are low profile, mechanically robust designs that can be custom tuned to meet discrete UHF frequencies, with an option to add thermal protection for high temperature environments.

APPLICATIONS:

Data Links, Telemetry, Transponder
Aircraft
UAVs
Helicopters
Tactical Missiles
Ships
Ground-Based Vehicles
Single or Array Implementations with Matching Power Dividers and Cables

FEATURES:

Hemispherical coverage options
Frequencies from UHF to C-Band
Small, Compact Footprint
Aerodynamic Design
Built to Withstand Extreme Shock & Vibration Environments
High powered blades available in white and grey
Qualified hardware options
Stp. files available upon request
Associated test hats available for select P/N's

CUSTOM ANTENNA DESIGN

Haigh-Farr designs custom antennas to meet customer specifications.

LEVERAGE EXISTING DESIGNS

Haigh-Farr can take an existing design and customize it to meet your application, saving NRE dollars and design time.

IN-HOUSE CAPABILITIES

Manufacturing & testing is done in-house.

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Rev E 11/23 approved for release

PART NUMBERS
61XX and 60XX Series

Haigh-Farr Rounded Blades (61XX) are identical in performance to our Straight Blades (60XX) and are often preferred for safety reasons due to their rounded radome over the sharp edges of 60XX series.

Round Blade P/N (61XX)	Straight Blade P/N (60XX)	Frequency Range GHz	VSWR TYPICAL/MAX	Average Power Standard*	Average Power -HP*	Height Inches [mm]
6102	6002	0.958 – 0.998	1.50:1/2.0:1	10W, up to 30W*	80W	2.3 [58.4]
6103	6003	1.25 - 1.40	1.50:1/2.0:1	10W, up to 30W*	80W	2.05 [52.1]
6103-1	6003-1	1.30 - 1.39	1.50:/2.0:1	10W, up to 30W*	80W	2.05 [52.1]
6104	6004	1.31 - 1.49	1.50:1/2.0:1	10W, up to 30W*	80W	1.67 [42.4] | 1.72 [43.7]
6107	6007	1.030 - 1.090	1.50:1/2.0:1	10W, up to 30W*	80W	2.30 [58.4]
6107-1		1.060 - 1.120	1.50:1/2.0:1	10W, up to 30W*	80W	2.30 [58.4]
6108	6008	0.9165 ± .025	1.50:1/2.0:1	10W, up to 30W*	80W	2.30 [58.4]
6108-1		0.876 - 0.960	1.50:1/2.0:1	10W, up to 30W*	80W	2.30 [58.4]
6109	6009	1.35 – 1.54	1.50:1/2.0:1	10W, up to 30W*	80W	1.75 [44.5]
6110	6010	1.43 – 1.54	1.25:1/1.5:1	10W, up to 30W*	80W	1.68 [42.7]
6110-2	6010-2	1.425 – 1.525	1.25:1/1.5:1	10W, up to 30W*	80W	1.68 [42.7]
6110-3	6010-3	1.45 – 1.65	1.50:1/2.0:1	10W, up to 30W*	80W	1.68 [42.7]
6110-4	6010-4	1.50 – 1.80	1.50:1/2.0:1	10W, up to 30W*	80W	1.68 [42.7]
6110-5		1.4 - 1.6	1.5:1/2.0:1	10W, up to 30W*	80W	1.68 [42.7]
6115	6015	1.60 – 1.70	1.25:1/1.5:1	10W, up to 30W*	80W	1.54 [39.1]
6120	6020	1.71 – 1.85	1.25:1/1.5:1	10W, up to 30W*	80W	1.45 [36.8]
6123	6023	1.8 - 2.2	1.50:1/2.0:1	10W, up to 30W*	80W	1.45 [36.8]
6125	6025	2.00 – 2.10	1.25:1/1.5:1	10W, up to 30W*	80W	1.19 [30.2] | 1.24 [31.5]
6125-1	6025-1	2.00 – 2.30	1.50:1/2.0:1	10W, up to 30W*	80W	1.19 [30.2] | 1.24 [31.5]
6130	6030	2.20 – 2.30	1.25:1/1.5:1	10W, up to 30W*	80W	1.19 [30.2]
6130-1	6030-1	2.30 – 2.40	1.25:1/1.5:1	10W, up to 30W*	80W	1.19 [30.2]
6130-2	6030-2	2.40 – 2.50	1.25:1/1.5:1	10W, up to 30W*	80W	1.19 [30.2]
6130-3	6030-3	2.20 – 2.40	1.25:1/1.5:1	10W, up to 30W*	80W	1.19 [30.2]
6130-4	6030-4	2.30 – 2.50	1.25:1/1.5:1	10W, up to 30W*	80W	1.19 [30.2]
6130-5	6030-5	2.18 - 2.48	1.50:1/2.0:1	10W, up to 30W*	80W	1.19 [30.2]
6130-6	6030-6	2.20 – 2.50	1.50:1/2.0:1	10W, up to 30W*	80W	1.19 [30.2]
6130-7	6030-7	2.5 - 2.7	1.50:1/2.0:1	10W, up to 30W*	80W	1.19 [30.2]
6130-8		2.1 - 2.4	1.50:1/2.0:1	10W, up to 30W*	80W	1.19 [30.2]
6135-1	6035-1	3.10 – 3.30	1.25:1/1.5:1	10W, up to 30W*	80W	1.19 [30.2]
6135-2	6035-2	3.45 – 3.55	1.25:1/1.5:1	10W, up to 30W*	80W	1.19 [30.2]
6135-3	6035-3	3.65 – 3.85	1.25:1/1.5:1	10W, up to 30W*	80W	1.19 [30.2]
6140	6040	4.50 – 5.00	1.25:1/1.5:1	10W, up to 30W*	80W	0.90 [22.9]
6140-1	6040-1	4.40 – 5.50	1.25:1/1.5:1	10W, up to 30W*	80W	0.90 [22.9]
6150	6050	5.40 – 5.90	1.25:1/1.5:1	10W, up to 30W*	80W	0.75 [19.1]
6150-1	6050-1	5.25 – 5.85	1.25:1/1.5:1	10W, up to 30W*	80W	0.75 [19.1]
6150-2	6050-2	6.40 – 6.60	1.25:1/1.5:1	10W, up to 30W*	80W	0.75 [19.1]

- **Weight: 1.10 oz Maximum**
- **Thermal environments: -50°C to 150°C; 300°C transient**
- **Polarization: Linear, predominately vertical**
- **Connector: SMA Standard, TNC Optional (50 Ω)**
- **Required Mounting Screws: 82° Flathead #4 Standard; 100° Flathead #4 or M3 optional**

***Note**: These antennas handle average power in the 25-30W CW range but sufficient airflow is required at these higher power levels for the antennas to perform properly. A static ground test will not provide the adequate airflow required. Haigh-Farr offers both a 60XX and 61XX high power version of all the above listed blades. For high powered versions simply add –HP to the end of the part number followed by -GY for Grey and -WH for White. High powered blades should be considered for power levels over 20W, please consult Haigh-Farr.

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PART NUMBERS
Multiband

P/N	Frequency Range GHz	Band	VSWR TYPICAL/MAX	Average Power	Average Power Standard*	Average Power -HP*	Height Inches [mm]	Weight (SMA) OZ [grams]	Notes
BL1-16180	0.350 - 1.250	Broadband/UHF	1.50:1/2.0:1	>50 W	10W, up to 30W*	**	6.677 [169.6]	38.4 [1088]	
BL1-16165-HP	1.7 - 2.5	Broadband	1.50:1/1.7:1	30 W	N/A	80W	1.56 [39.62]	1.3 [36]	
16100-XX	2.2 - 5.85		1.50:1/1.7:1		10W, up to 30W*	**	1.13 [28.7]	1 [28]	
16110-XX	1.25 - 2.6 & 4.3 - 5.5	Dual Band					2.17 [55.5]	2.2 MAX	
16120-XX	1.43 - 1.45 & 5.09 - 5.25		<2:1		10W, up to 30W*	**	2.02 [51.2]	1 [28]	
16150-XXX	1.4 - 2.7 & 4.3 - 5.5		1.75:1/2.0:1		80W	N/A	1.87 [47.5]	2 [56]	
16160-XXX	1.4 - 2.7 & 4.3 - 5.5		<2:1		10W, up to 30W*	**	1.87 [47.5]	1.27 [36]	16150 with larger base
16350-XXX	1.4 - 2.7 & 4.3 - 5.5		1.50:1/2.0:1		80W	N/A	1.87 [47.5]	2.1 [59.5]	Molded version of 16150
16360-XXX	1.4 - 2.7 & 4.3 - 5.5		1.50:1/2.0:1		80W	N/A	1.87 [47.5 mm]	3.2 [81.3 mm]	Molded version of 16160

PART NUMBERS
UHF

Round Blade P/N (61XX)	Straight Blade P/N (60XX)	Frequency Range MHz	VSWR TYPICAL/MAX	Average Power Standard*	Average Power -HP*	Height Inches [mm]	Weight (SMA) OZ [grams]
	6300-1	450 - 470	1.50:1/2.0:1	10W, up to 30W*	**	5.90 [149.9]	5.6 [159]
	6300-2	420 - 470	1.50:1/2.0:1	10W, up to 30W*	**	5.90 [149.9]	5.6 [159]
	6300-3	389 - 425	1.50:1/2.0:1	10W, up to 30W*	**	5.90 [149.9]	5.6 [159]
	6300-FFF	Factory tuned between 410 - 450 with 25 MHz Bandwidth	1.50:1/2.0:1	10W, up to 30W*	**	5.90 [149.9]	5.6 [159]
16230-XXX		Factory tuned between 420 - 470, 1.5 MHz bandwidth	<2:1	10W, up to 30W*	**	1 [25.4]	7 [198.4]
16400-XXX		380 - 430	<2:1	10W, up to 30W*	**	1 [25.4]	5 [141.7]

- **Thermal environments: -50°C to 150°C; 300°C transient**
- **Polarization: Linear, predominately vertical**
- **Connector: SMA Standard, TNC Optional (50 Ω)**
- **Required Mounting Screws: 82° Flathead #4 Standard; 100° Flathead #4 or M3 optional**

***Note**: These antennas handle average power in the 25-30W CW range but sufficient airflow is required at these higher power levels for the antennas to perform properly. A static ground test will not provide the adequate airflow required. For high powered versions simply add –HP to the end of the part number followed by -GY for Grey and -WH for White. High powered blades should be considered for power levels over 20W, please consult Haigh-Farr.

****Note**: Consult Haigh-Farr for additional information.

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