



DFA 2451

Direction-finding antenna

MF

HF

VHF

UHF

SHF

20 MHz – 3000 (6000) MHz

The DFA 2451 is a high sensitivity, fully passive, seven channel direction-finding antenna covering 1 to 6000 MHz. Specifically designed for maritime applications, the lightweight antenna can be used in harsh environments and withstands wind speeds of up to 180 km/h when mounted on a suitable mast. The dipole antenna is vertically polarised, works effectively with the correlative interferometer DF method. Antenna extensions deliver a high sensitivity for 20 to 400 MHz.

TECHNICAL HIGHLIGHTS

- 7 channel fully passive antenna with factory calibration
- highly resistant to multi-path scattering and polarisation changes
- lightning rod on top of the antenna
- junction box with low noise amplification
- antenna stand designed for tower application
- extended environmental resistant – temperature, shock, vibration, salt fog
- integrated HF direction-finding section (optional)
- integrated omni module (optional)

CUSTOMER ADVANTAGES

- high resistance to multipath propagation and high sensitivity
- withstands high electrostatic discharge
- designed for mounting on tower mast systems in a maritime environment
- integrated HF option enables shortwave direction-finding on vessels
- integrated monitoring capabilities reduces the number of required antennas

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DFA 2451	
DF frequency range	(1) 20 MHz – 3000 (6000) MHz
Subrange VLF/LF/MF	n/a
System sensitivity	n/a
DF accuracy	n/a
Subrange MF/HF	n/a
System sensitivity	0.5 MHz – 6 MHz typ. 10 μ V/m 6 MHz – 30 MHz typ. 3 μ V/m
DF accuracy	$\leq 2^\circ$ RMS
Subrange VHF	20 MHz – 400 MHz
System sensitivity	typ. 6 μ V/m
DF accuracy	1° RMS
Subrange VHF/UHF	400 MHz – 1200 MHz
System sensitivity	typ. 7 μ V/m
DF accuracy	1.5° RMS
Subrange UHF	1200 MHz – 3000 MHz
System sensitivity	typ. 10 μ V/m
DF accuracy	1.5° RMS
Subrange SHF	3000 MHz – 6000 MHz
System sensitivity	typ. 30 μ V/m
DF accuracy	1.5° RMS
DF method	correlative interferometer
Antenna type	passive
Antenna configuration	dipole
Antenna elements	21
Channels	7
Polarisation	vertical
Omnidirection monitoring Antenna/output	optional
BITE	external calibration
Operating temperature	-40° to +70° C
Storage temperature	-40 to +70° C
Environmental protection	IP 55
Maximum wind velocity (w/o icing)	180 km/h (50 m/s)
Power consumption	12 VDC, I _{max} = 2.5 A
Weight	55 kg
Diameter	1200 mm
Height	1940 mm
Required space	mast
Installation	mast
Set-up time	fixed installation