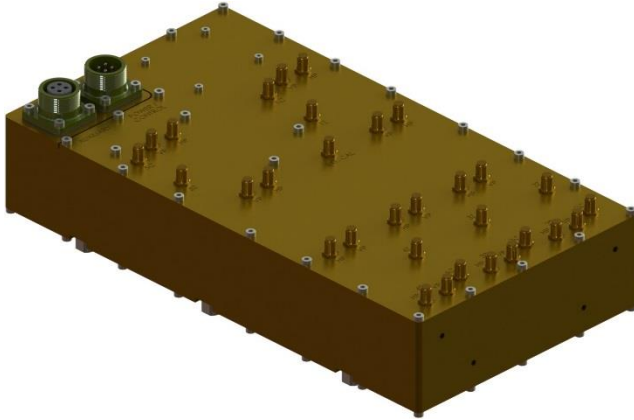


High-Speed DF Band Switch

100 – 3000 MHz

Product Code: DF-A0086

VERSION: 1.6



PRODUCT DESCRIPTION:

The DF-A0086 is a 3-band, 5-channel DF switch. It is designed specifically for band selection on DF-A0085, a fully dual polarised direction finding antenna. However, it may also find application in active DF antennas. The switch is designed to be mounted internally within the fully weatherproof enclosure, DF-A0057.

The switch comprises five parallel channels, each equipped with input power limiters, ESD protection, low noise amplifier and band switch. A “calibration band” can also be selected, providing a balanced 5-way split of an internally generated or externally supplied calibration signal for chain and receiver calibration. Each channel features a low-noise amplifier within the calibration chain to help overcome switch and cable loss. On bands A and B, a solid state switch selects between the VP and HP ports of the DF-A0085 before the band switch chain.

The switch accepts a very wide input voltage range and is controlled via EIA-485 (RS-485). All switching is solid state for rapid band change and unlimited switching cycles.

PRODUCT FEATURES:

- 3-band, 5-channel switch
- Low noise amplifier on each channel
- Wideband internal noise source for chain calibration
- External injection mode for chain calibration
- High-speed solid state switching
- Limiter and ESD protection on each input in order to allow operation in adverse EM environments
- Integrated filters are included to assist with out of band rejection
- Polarisation selection on bands A and B
- Over current protection on the switchable DF channels

SPECIFICATIONS:

Product codes:	
DF-A0086	3–band, 5–channel, 25–input switch
Electrical: DF chain	
Frequency range	100 – 3000 MHz
Input VSWR	< 2.0:1
Noise figure	< 7 dB
Gain	10 ± 2 dB
Output IP3	24 dBm (below 1 GHz) 22 dBm (above 1 GHz)
Maximum input level	30 dBm CW, 45 dBm at 1% duty factor in 1µs pulse
Input connectors	SMA female
Output connectors	SMA female
Electrical: CAL chain	
Amplitude imbalance	< 1 dB
Phase imbalance	< 10°
Gain, < 100MHz	-3 ± 1 dB
Gain, 1 GHz	-3 ± 1 dB
Gain, 3 GHz	-7 ± 1 dB
Max input level	20 dBm
Internal noise source output level	+45 to +65 dB ENR
Input connector	SMA female
Power and control:	
Power supply	19 – 36 V DC, 1.2 A
Control	EIA-485 (RS-485)
Connector	MS3102A-14S-2P
Mechanical:	
Dimensions	317 mm x 168 mm x 80 mm
Total mass	< 4 kg
External material	Aluminium
Environmental: designed to meet the following specifications	
Temperature range	-20 °C to +70 °C
Vibration	0.02 g ² /Hz, 2 – 300 Hz
Shock	40 G for 10 ms
Water ingress rating	IP54
Humidity	0 – 95 %, non-condensing

APPLICATIONS:

- DF band switching for our range of dual-polarised direction finding antenna, particularly DF-A0085.
- DF band switching for active DF antennas, whether for impedance matching and/or cable loss compensation