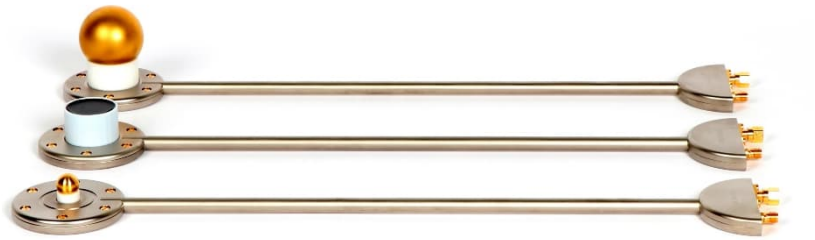
Ground Plane Field Sensors

Our range of derivative ground plane electromagnetic field sensors is designed for the measurement of fast pulsed fields. Different models are available: for electric field (D-dot) and for magnetic fields (B-dot).

Because the sensors are passive, no external power source is required. These ground plane sensors can be directly connected to a high impedance input of a fast oscilloscope through a special coaxial cable and a passive integrator or connected through an analogue fibre optic link. A fibre optic link may be used if the distance from the sensor to the measurement equipment is very long.



REFERENCE	SGE1G	SGE3-5G	SGE10G	SGM2G
Type	D-Dot (electric)	D-Dot (electric)	D-Dot (electric)	B-Dot (magnetic)
Equivalent area (Aeq)	1 x 10^{-2} m^2	1 x 10^{-3} m^2	1 x 10^{-4} m^2	1.1 x 10^{-4} m^2
Frequency response (-3 dB)	1 GHz	3.5 GHz	10 GHz	2 GHz
Risetime (10 – 90 %)	320 ps	110 ps	32 ps	180 ps
Peak maximum output	1 kV	1 kV	1 kV	1 kV
Output connector	SMA (female)	SMA (female)	SMA (female)	SMA (female)
Weight	500 g	275 g	195 g	320 g
Dimensions (L x W x H)	406 x 60 x 55 mm	406 x 60 x 23 mm	406 x 60 x 13.5 mm	406 x 60 x 27 mm

Ordering information

REFERENCE	DESCRIPTION
SGE1G	Ground plane D-dot field sensor (E-field), Aeq 1 x 10^{-2} m^2, up to 1 GHz, SMA connector
SGE3-5G	Ground plane D-dot field sensor (E-field), Aeq 1 x 10^{-3} m^2, up to 3.5 GHz, SMA connector
SGE10G	Ground plane D-dot field sensor (E-field), Aeq 1 x 10^{-4} m^2, up to 10 GHz, SMA connector
SGM2G	Ground plane B-dot field sensor (B-field), Aeq 1.1 x 10^{-4} m^2, up to 2 GHz, SMA connector

Related products / accessories

TYPE	DESCRIPTION
Cx-SN	50 ohm semi-rigid coaxial cable for field sensors, frequency range: DC - 33 GHz, SMA(m) - N(m) connectors. x = the cable length ; available lengths are 1, 3, 5, 10, 15 m
MOL3000	Point-to-point optical link, 80 Hz – 3.5 GHz, fixed 0 dB gain, including one optical transmitter on battery, one optical receiver on battery, two battery chargers and one carrying case
MOL2000T2	Point-to-point optical link, 80 Hz – 3.5 GHz, -62dB to +24dB remote controlled gain through USB, including one optical transmitter on battery, one optical receiver on battery, two battery chargers, one USB OTG cable, one FibREmote software for PC and Android and one carrying case
MOL2000T2-M	Single channel optical link for chassis MOL-MF-xx, 80 Hz – 3.5 GHz, -62dB to +24dB remote controlled gain, including one optical transmitter on battery, one optical plug-in receiver module and one battery charger
ITR1U2-A	Passive integrator, T = 1.2 us, up to 1 GHz, connectors: N(f) - BNC(m) Note: an alternative to this integrator device is to perform the signal integration numerically using the Montena PULSELab software
PULSELab	Pulse measurement and processing software application, Life time license for installation on one PC