

# 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)	$1 \times 10^{-2} \text{ m}^2$	$1 \times 10^{-3} \text{ m}^2$	$1 \times 10^{-4} \text{ m}^2$	$1.1 \times 10^{-4} \text{ m}^2$
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
<b>SGE1G</b>	Ground plane D-dot field sensor (E-field), Aeq $1 \times 10^{-2} \text{ m}^2$ , up to 1 GHz, SMA connector
<b>SGE3-5G</b>	Ground plane D-dot field sensor (E-field), Aeq $1 \times 10^{-3} \text{ m}^2$ , up to 3.5 GHz, SMA connector
<b>SGE10G</b>	Ground plane D-dot field sensor (E-field), Aeq $1 \times 10^{-4} \text{ m}^2$ , up to 10 GHz, SMA connector
<b>SGM2G</b>	Ground plane B-dot field sensor (B-field), Aeq $1.1 \times 10^{-4} \text{ m}^2$ , up to 2 GHz, SMA connector

Related products / accessories

TYPE	DESCRIPTION
<b>Cx-SN</b>	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
<b>MOL3000</b>	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
<b>MOL2000T</b>	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 8" Android tablet and one carrying case
<b>MOL2000T-M</b>	Single channel optical link for multilink chassis, 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
<b>ITR1U2-A</b>	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
<b>PULSELab</b>	Pulse measurement and processing software application, Life time license for installation on one PC

