

SRM-3006 with Tri-axial Isotropic E-Field Antenna

Uncertainties	SRM-3006 with 10 dB cable and 3-axis E field antenna								SRM-3006 with cable and 3-axis E field antenna								
	Lower Frequency:	27	85	300	600	900	1400	1800	2200	27	85	300	600	900	1400	1800	2200
	Upper Frequency:	85	300	600	900	1400	1800	2200	2700	85	300	600	900	1400	1800	2200	2700
Considered Cable & Additional Attenuation	10.0 dB	10.0 dB	10.0 dB	10.5 dB	10.7 dB	10.9 dB	11.1 dB	11.3 dB	0.0 dB	0.0 dB	0.0 dB	0.5 dB	0.7 dB	0.9 dB	1.1 dB	1.3 dB	
Primary DATA for Uncertainty in dB																	
Level uncertainty of basic unit (1)	1.2 dB	1.2 dB	1.2 dB	1.2 dB	1.2 dB	1.2 dB	1.2 dB	1.2 dB	1.2 dB	1.2 dB	1.2 dB	1.2 dB	1.2 dB	1.2 dB	1.2 dB	1.2 dB	
Calibration uncertainty of cable attenuation (2)	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	
Calibration uncertainty of antenna factor (2)	1.3 dB	1.5 dB	1.3 dB	1.3 dB	1.3 dB	1.3 dB	1.3 dB	1.2 dB	1.2 dB	1.3 dB	1.5 dB	1.3 dB	1.3 dB	1.3 dB	1.2 dB	1.2 dB	
Ellipse Ratio of antenna (2)	0.5 dB	0.5 dB	0.5 dB	0.5 dB	0.8 dB	1.4 dB	1.7 dB	1.9 dB	0.5 dB	0.5 dB	0.5 dB	0.5 dB	0.8 dB	1.4 dB	1.7 dB	1.9 dB	
Mismatch uncertainty: Basic unit / Cable (2)	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	0.2 dB	
Mismatch uncertainty: Cable / Antenna (2)	0.5 dB	0.5 dB	0.5 dB	0.5 dB	0.5 dB	0.4 dB	0.3 dB	0.4 dB	0.5 dB	0.5 dB	0.5 dB	0.5 dB	0.5 dB	0.4 dB	0.3 dB	0.4 dB	
Mismatch uncertainty: Basic unit / Antenna (2)	0.4 dB	0.4 dB	0.4 dB	0.3 dB	0.3 dB	0.3 dB	0.2 dB	0.2 dB	1.2 dB	1.2 dB	1.1 dB	1.0 dB	1.0 dB	0.8 dB	0.7 dB	0.7 dB	
Secondary DATA for Uncertainty in %																	
Level uncertainty of basic unit (1)	14.82 %	14.82 %	14.82 %	14.82 %	14.82 %	14.82 %	14.82 %	14.82 %	14.82 %	14.82 %	14.82 %	14.82 %	14.82 %	14.82 %	14.82 %	14.82 %	
Calibration uncertainty of cable attenuation (2)	2.33 %	2.33 %	2.33 %	2.33 %	2.33 %	2.33 %	2.33 %	2.33 %	2.33 %	2.33 %	2.33 %	2.33 %	2.33 %	2.33 %	2.33 %	2.33 %	
Calibration uncertainty of antenna factor (2)	16.14 %	18.85 %	16.14 %	16.14 %	16.14 %	16.14 %	16.14 %	14.82 %	14.82 %	16.14 %	18.85 %	16.14 %	16.14 %	16.14 %	14.82 %	14.82 %	
Ellipse Ratio of antenna (2)	5.93 %	5.93 %	5.93 %	5.93 %	9.65 %	16.82 %	20.92 %	24.45 %	5.93 %	5.93 %	5.93 %	5.93 %	9.65 %	16.82 %	20.92 %	24.45 %	
Mismatch uncertainty: Basic unit / Cable (2)	2.20 %	2.20 %	2.20 %	2.20 %	2.20 %	2.20 %	2.20 %	2.20 %	2.33 %	2.20 %	2.20 %	2.20 %	2.20 %	2.20 %	2.20 %	2.20 %	
Mismatch uncertainty: Cable / Antenna (2)	6.50 %	6.50 %	6.30 %	5.80 %	5.80 %	5.00 %	4.00 %	4.50 %	5.93 %	6.50 %	6.30 %	5.80 %	5.80 %	5.00 %	4.00 %	4.50 %	
Mismatch uncertainty: Basic unit / Antenna (2)	4.60 %	4.60 %	4.50 %	3.80 %	3.80 %	3.20 %	2.50 %	2.70 %	14.82 %	14.60 %	14.10 %	12.20 %	11.90 %	10.10 %	7.80 %	8.60 %	
Standard Uncertainty in %																	
Level uncertainty of basic unit (1)	7.56 %	7.56 %	7.56 %	7.56 %	7.56 %	7.56 %	7.56 %	7.56 %	7.56 %	7.56 %	7.56 %	7.56 %	7.56 %	7.56 %	7.56 %	7.56 %	
Calibration uncertainty of cable attenuation (2)	1.19 %	1.19 %	1.19 %	1.19 %	1.19 %	1.19 %	1.19 %	1.19 %	1.19 %	1.19 %	1.19 %	1.19 %	1.19 %	1.19 %	1.19 %	1.19 %	
Calibration uncertainty of antenna factor (2)	8.24 %	9.62 %	8.24 %	8.24 %	8.24 %	8.24 %	7.56 %	7.56 %	8.24 %	9.62 %	8.24 %	8.24 %	8.24 %	8.24 %	7.56 %	7.56 %	
Ellipse Ratio of antenna (2)	3.43 %	3.43 %	3.43 %	3.43 %	5.58 %	9.72 %	12.09 %	14.13 %	3.43 %	3.43 %	3.43 %	3.43 %	5.58 %	9.72 %	12.09 %	14.13 %	
Mismatch uncertainty: Basic unit / Cable (2)	1.56 %	1.56 %	1.56 %	1.56 %	1.56 %	1.56 %	1.56 %	1.56 %	1.65 %	1.56 %	1.56 %	1.56 %	1.56 %	1.56 %	1.56 %	1.56 %	
Mismatch uncertainty: Cable / Antenna (2)	4.61 %	4.61 %	4.47 %	4.11 %	4.11 %	3.55 %	2.84 %	3.19 %	4.20 %	4.61 %	4.47 %	4.11 %	4.11 %	3.55 %	2.84 %	3.19 %	
Mismatch uncertainty: Basic unit / Antenna (2)	3.26 %	3.26 %	3.19 %	2.70 %	2.70 %	2.27 %	1.77 %	1.91 %	10.51 %	10.35 %	10.00 %	8.65 %	8.44 %	7.16 %	5.53 %	6.10 %	
Combined Standard Uncertainty:	13.13 %	14.04 %	13.07 %	12.84 %	13.57 %	15.53 %	16.60 %	18.21 %	16.40 %	17.14 %	16.14 %	15.24 %	15.75 %	16.95 %	17.41 %	19.11 %	
Expanded Uncertainty @ 95% confidence:	25.74 %	27.52 %	25.61 %	25.16 %	26.60 %	30.43 %	32.54 %	35.70 %	32.14 %	33.59 %	31.64 %	29.88 %	30.87 %	33.22 %	34.12 %	37.46 %	
Power related Factor Final (k = 1.96):	1.58	1.63	1.58	1.57	1.60	1.70	1.76	1.84	1.75	1.78	1.73	1.69	1.71	1.77	1.80	1.89	
Expanded Uncertainty Final (k = 1.96):	2.0 dB	2.1 dB	2.0 dB	1.9 dB	2.0 dB	2.3 dB	2.4 dB	2.7 dB	2.4 dB	2.5 dB	2.4 dB	2.3 dB	2.3 dB	2.5 dB	2.5 dB	2.8 dB	

Temperature : **20 °C**
 Temperature Uncertainty **15 °C** to **30 °C** 1.1 dB Operating Range: **-10 °C** to **50 °C**

(1) Includes all influencing quantities (e.g. attenuator, linearity and calibration uncertainty) for temperatures from 15 °C to 30 °C.

For temperature range from -10 °C to 50 °C the uncertainty increases from 1.2 dB to 2.0 dB.

(2) The temperature response is negligible.