

Technical Specifications for 13.56MHz / 10kW Power Instrument

PN#13S10F3R

rev03

**Electrical Characteristics**

<i>Nominal Impedance</i>	50Ω
<i>Nominal Forward Power²</i>	10,000W
<i>Forward Power Accuracy¹</i>	1.0% of Reading or 10W, whichever is higher, at Nominal Frequency; 2.0% of Reading or 20W, whichever is higher, at frequencies different from Nominal Frequency
<i>Calibration Report</i>	NIST Traceable, ISO17025:2017 Compliant
<i>Nominal Reflected Power²</i>	3,000W
<i>Reflected Power Accuracy¹</i>	Same as Forward channel
<i>Nominal Frequency</i>	13.56MHz
<i>Frequency Range⁴</i>	+/-5% of Nominal Frequency

<i>MAX Allowable Power</i>	120% of Nominal Power
<i>Directivity</i>	Min. 30dB
<i>Max. Allowable Terminating VSWR</i>	Continuous use: VSWR is restricted to any load that requires more than 15.5A _{rms}
<i>Calibration Technique</i>	<ul style="list-style-type: none"> • Power calibration factors stored in nonvolatile memory, performed at min 3 Power Levels • Temperature compensation • Frequency compensation
<i>Calibration Cycle, Nominal</i>	6 months
<i>Insertion Loss</i>	Max. 0.02dB
<i>Harmonic Rejection</i>	Min. 20dB
<i>Pulsing Signal Capability</i>	Min. 500Hz
<i>Gamma</i>	<p>Calculated from P_r (Reflected Power) and P_f (Forward Power):</p> $Gamma = \sqrt{\frac{P_r}{P_f}}$
<i>VSWR</i>	<p>Calculated from Gamma:</p> $VSWR = \frac{1 + Gamma}{1 - Gamma}$
<i>Operating Power</i>	Wall plug adapter (standard), USB or battery
<i>RF Connectors³</i>	LC Female - both ends
<i>Battery</i>	Li-Ion
<i>Battery Life / Charge Time</i>	12 Hours minimum / 6 hours maximum
<i>Battery Charger</i>	Built in. Power supplied by wall plug adapter or USB
<i>Display</i>	LCD 4 lines x 16 characters

<i>Interfaces</i>	RS-232 and USB 2.0
<i>Output Data Rate, Nominal</i>	15 readings/second

Operating Environmental conditions

<i>Humidity, Max.</i>	65% (non-condensing)
<i>Operating Temperature range</i>	20°C to 35°C (+68°F to +95°F)
<i>Altitude</i>	78.8kPa to 106kPa (6,562ft/2,000m to -1,640ft/-500m)

Storage/Transportation Environmental conditions

<i>Storage Relative Humidity, Max</i>	65% (non-condensing)
<i>Altitude</i>	Standard atmospheric pressure variations, not exceeding 523mbar - 3,000m (10,000 ft)
<i>Storage Temperature range</i>	-20°C to + 70°C (-4°F to +158°F)
<i>Dimensions (without connectors)</i>	2.5"L x 3.75"H x 4.75L" (63 x 95 x 121mm)
<i>Weight, Nominal</i>	2lb. 4oz. (1.02kg)

- 1- Accuracy is measured into a 50Ω pure resistive load
- 2- Forward and Reflected Channel power levels can be custom scaled up to 10kW
- 3- End connectors: different end connectors are available on request
- 4- Optional feature