



rf/microwave instrumentation

Model SSMIL10V2M40G MIL-STD-461D/E/F/G AR Standard System 2MHz–40GHz 10 V/m CW at 1 Meter Test Distance

The SSMIL10V2M40G System is designed to develop a 10 V/m field level at a 1m test distance for MIL-STD-461D/E/F/G testing from 2MHz to 40 GHz. The signal generation, control, and power monitoring equipment shall be mounted in a ventilated equipment rack along with the RF amplifiers.

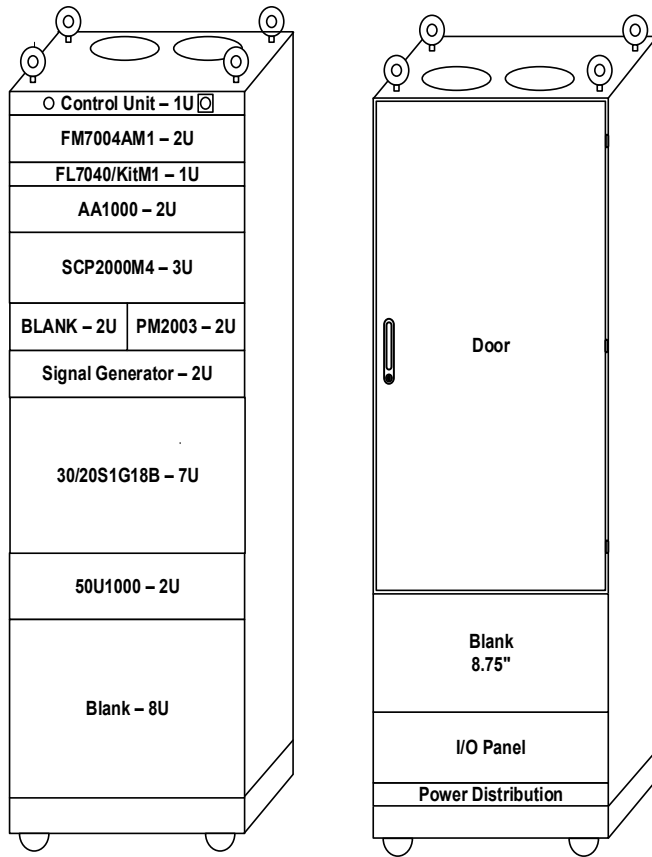
The SSMIL10V2M40G AR System consists of the AR equipment, listed herein. Please refer to individual product specification sheets for details. The export classification for this equipment is 3A001. This equipment is controlled for export in accordance with the U.S. Export Administration Regulations. Diversion contrary to U.S. law is prohibited.

AR Standardized Systems are customizable upon request. Contact AR for all such requests.

MIL-STD-461 AR Standard System Summary Requirements	
Parameter	Description
System Frequency Range	2 MHz–40 GHz
CW Field Strength	10 V/m
Test Distance	1 meter
Amplifier Configuration	Two (2) RF amplifiers were chosen for this test system: Model 50U1000: 10 kHz–1000 MHz, 50 Watts Model 30/20S1G18B, RF Amplifier, 1–18 GHz, 30/20 Watts CW
Antenna Configuration	Dedicated antennas for each amp to provide optimal field generation: Model ATE10K100MM2: 10 kHz–100 MHz, E-Field Generator Model ATR80M6G: 80 MHz–6 GHz Log Periodic Model DRH-118: 1–18 GHz Horn Model AA18G26-20: 18–26.5 GHz Model AA26G40-20: 26.5-40 GHz
RF Cable Configuration	Three sets (one for each amp) consisting of 2 and 4 meter lengths and designated bulkhead feedthroughs for each set. One set included with AA1000.
Software Configuration	System and testing will be controlled using emcware® software which is preloaded and delivered on a new laptop as part of overall system. Price includes a 1 year support contract.
Design approach	Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000M4. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.
Installation, Site Acceptance Testing (SAT) and Training	One week of installation, SAT and Training will be provided by AR Systems Engineers
Export Classification	3A001
<i>Assumptions: 3 dB power margin on amplifiers to accommodate reasonable chamber and system losses Field strength calculations are based on free-space conditions</i>	

Model SSMIL10V2M40G Equipment List	
Component	Quantity
Model 50U1000-R-N-R-N-NE-R-U, Amplifier, 10kHz–1000MHz, 50 Watts CW	1
Model DC3010A, Dual Directional Coupler, 10kHz–1000MHz, 100 Watts CW	1
Model ATE10K100M, E-Field Generator, 10kHz–100MHz, 500 Watts CW	1
Model ATR80M6G, Log Periodic Antenna, 80MHz–1GHz, 5000 Watts CW	1
Model TP1000B, Non-metallic Tripod	2
Model 30/20S1G18B-R-N-NE-U, RF Amplifier, 1–18 GHz, 30/20 Watts CW	1
Model DC7420, Dual Directional Coupler, 0.8–18GHz, 50 Watts CW	1
Model DRH-118, Horn Antenna, 1–18 GHz, 175 Watts CW	1
Model SCP2000M4, System Controller, DC–40 GHz	1
Model PM2003, Power Meter, 3 channels	1
Model PH2005, Power Head, 500 kHz–18GHz, -60dBm to +20dBm	2
Analog Signal Generator, 9kHz–40GHz, rear panel connectors (Keysight N5173B-540 EXG X-series with options - UNW, -UNT, -1E1, -1EM, -UK6, -1CM110A or equivalent)	1
Model FC7020, Fiber Optic Cable Set, 20m	1
Model FM7004AM1, Field Monitor	1
Model FL7040/KitM1, Field Probe Kit, 2MHz–40GHz, 2-1000V/m	1
Model PS2000B, Probe Stand	1
Model CC41111020, Low Loss Coaxial cable, N male, N male connectors, 2m	2
Model CC41111040, Low Loss Coaxial cable, N male, N male connectors, 4m	2
All internal interconnect cables between system components	Included
Model AA1000, AA-Series RF and Power Unit	1
Model AA18G26-50, Solid State, RF Field Generator, 18–26.5GHz, 50V/m	1
Model AA26G40-50, Solid State, RF Field Generator, 26.5–40GHz, 50V/m	1
Test System Control PC	1
Model emcware® 5.0, Radiated Susceptibility, Conducted Immunity, and Emissions Test Software*	1
emcware® 5.0, 1-year support contract*	1

*Model emcware® 5.0 and service contract to be quoted as separate line items and are therefore not included in the price of the system



Front

Rear

Rack Physical Specifications:

- Size (H x W x D) 150.52 x 56.03 x 82.3 cm (59.26 x 22.06 x 32.4 in)
- Weight 109 kg (240 lb)
- Power Input 240VAC, 1-phase, 30 Amps