



rf/microwave instrumentation

Model SSMIL200V2M18G MIL-STD-461D/E/F/G AR Standard System 2 MHz to 18 GHz 200 V/m CM at 1 Meter Test Distance

The SSMIL200V2M18G System is designed to develop a 200 V/m field level at a 1 m test distance for MIL-STD-461D/E/F/G testing from 2 MHz to 18 GHz. The signal generation, control, and power monitoring equipment shall be mounted in a ventilated equipment rack along with the RF amplifiers.

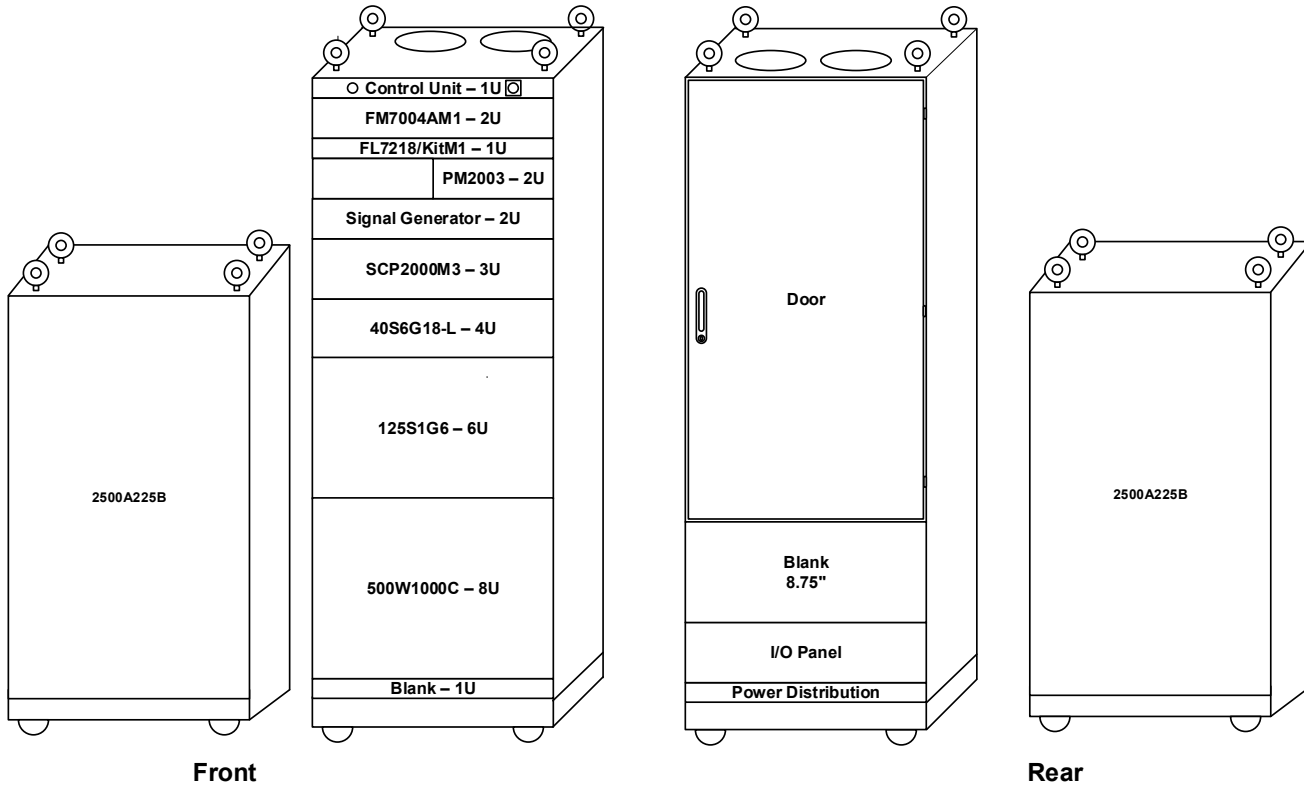
The SSMIL200V2M18G AR System consists of the AR equipment, listed herein. Please refer to individual product specification sheets for details. The export classification for this equipment is 3A001. This equipment is controlled for export in accordance with the U.S. Export Administration Regulations. Diversion contrary to U.S. law is prohibited.

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

Summary Requirements	
Parameter	Description
System Frequency Range	2 MHz–18 GHz
CW Field Strength	200 V/m
Test Distance	1 meter
Amplifier Configuration	Four (4) RF amplifiers were chosen for this test system: Model 2500A225B: 10 kHz–225 MHz, 2500 Watts Model 500W1000C: 80–1000 MHz, 500 Watts Model 125S1G6: 1–6 GHz, 125 Watts Model 40S6G18-L: 6–18 GHz, 40 Watts
Antenna Configuration	Dedicated antennas for each amp to provide optimal field generation: Model ATE10K30MAM2, Field Generator, 10 kHz–30 MHz Antenna, 25–100 MHz, 3000W CW (TDK HPBR-2510) Model ATR80M6GM2, Log-periodic Antenna, 80 MHz–6 GHz Model ATH200M2G, Horn Antenna, 200 MHz–2 GHz Model ATH800M6G, Horn Antenna, 1–6 GHz Model ATH6G18, Horn Antenna, 6–18 GHz
RF Cable Configuration	Four sets (one for each amp) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.
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 SCP2000M3. 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
Assumptions: 3 dB power margin on amplifiers to accommodate reasonable chamber and system losses Field strength calculations are based on free-space conditions	

Model SSMIL200V2M18G Equipment List	
Component	Quantity
Model 2500A225B-R-N-R-716-SPR-XX, RF Amplifier, 10 kHz–225 MHz, 2500 Watts	1
Model 500W1000C-R-N-R-N-NSP-NE, RF Amplifier, 80 MHz–1 GHz, 500 Watts CW	1
Model 125S1G6M3, RF Amplifier, 1–6 GHz, 125 Watts CW	1
Model 40S6G18-L-R-N-R-N-NE-U, RF Amplifier, 6–18 GHz, 40 Watts CW	1
Model DC2035A, Dual Directional Coupler, 10 kHz–225 MHz, 3500 Watts	1
Model DC6180A, Dual Directional Coupler, 80 MHz–1 GHz, 600 Watts	1
Model DC7205A, Dual Directional Coupler, 700 MHz–6 GHz, 250 Watts	1
Model DC7435A, Dual Directional Coupler, 6–18 GHz, 200 Watts	1
Model ATE10K30MAM2, Field Generator, 10 kHz–30 MHz	1
Antenna, 25–100 MHz, 3000W CW (TDK HPBR-2510)	1
Model ATR80M6GM2, Log-periodic Antenna, 80 MHz–6 GHz, 2000W CW	1
Model ATH200M2G, Horn Antenna, 200 MHz–2 GHz, 1000W CW	1
Model ATH800M6G, Horn Antenna, 1–6 GHz, 1500W CW	1
Model ATH6G18, Horn Antenna, 6–18 GHz, 650W CW	1
Model AD1502, Adapter, WRD-650 to N (female)	1
Model TP1000B, Non-metallic Tripod	1
Model SCP2000M3, System Controller, DC–18 GHz	1
Signal Generator, 9 kHz–20 GHz (Keysight N5173B-520 with options -1EM, -UNT, -UNW, -1E1, -UK6, -1CM110A)	1
Model PM2003, Power Meter, 3 channels	1
Model PH2005, Power Head, 500 kHz–18 GHz, -70 to +20dBm	2
Model FM7004AM1, Field Monitor	1
Model FL7218/KitM1, Field Probe, 2 MHz–18 GHz, 2-1000V/m	1
Model PS2000B, Probe Stand, Non-Conductive	1
Model CC11111020, Coaxial Cable, DC–18 GHz, N connectors, 2m long	3
Model CC11111050, Coaxial Cable, DC–18 GHz, N connectors, 5m long	3
Model CC41313020, Coaxial Cable, DC–6 GHz, 7/16 DIN connectors, 2m long	1
Model CC41313050, Coaxial Cable, DC–6 GHz, 7/16 DIN connectors, 5m long	1
All internal Interconnect cables between system components	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



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

Amplifier Physical Specifications (2500A225B)

Size (H x W x D) 132.1 x 56.1 x 82.4 cm (52.0 x 22.1 x 32.5 in)
 Weight 159 kg (350 lbs)
 Power Input 380-415 VAC, 3-phase, 8.5 kW maximum