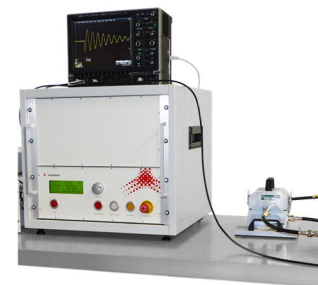


DCS05.B Damped Sinusoid generators

Montena proposes transient generators which enable tests according to the requirements of the DEF STAN 59-411 Part 3 DCS05.B for Land and Sea Services equipment.

The purpose of the DCS05 test is to verify the ability of the EUT to withstand damped sinusoidal excitation on power supply lines and interconnecting bundles over the frequency ranges 0.5 MHz to 50 MHz. The generators can be ordered with a complete set of accessories, consisting basically of an injection probe, an attenuator, an oscilloscope and a control software. The generators have one single signal output for all test frequencies and do therefore not require any change of connections during the test. This feature reduces the test duration and enables automated calibration and test sequences.

The generator model PG-DCS05B-100A enables switching and NEMP simulations for all Land and Sea Services equipment - Below Decks and Above Decks - up to 100 A. The PG-DCS05B-9 and -15 are more compact versions that enable switching and NEMP simulations up to 25 A, thus suitable for testing Sea Services - Below Decks equipment as well as Land Services equipment mounted within armoured vehicles.



SPECIFICATIONS

Type	PG-DCS05B-100A	PG-DCS05B-9
Applicable standard(s)	DEF STAN 59-411 Part 3 DCS05.B Switching Simulation and NEMP Simulation for All Land and Sea Services equipment (Below Decks and Above Decks)	DEF STAN 59-411 Part 3 DCS05.B - NEMP Simulation: Sea Services, Below Decks - Switching Simulation: All Land and Sea Services equipment (Below Decks and Above Decks)
Maximum output current (depends on the frequencies)	≥ 100 A into 10 Ω load	≥ 25 A into 10 Ω load
Test frequencies	0.5, 1, 2, 3, 5, 10, 15, 35, 50 MHz	
Damping (Q) factor	6.8 - 32.8	
Output impedance	< 100 Ω	
Repetition rates	single, 0.5 Hz, 1 Hz	
Output signal connection	N 50 ohm	
Power rating	90 - 250 Vac / 50 - 60 Hz / 35 W / 75 VA	
Storage / operating temperatures	5 - 50 °C / 15 - 45 °C	
Total weight	170 kg	19" subrack: 17.0 kg with 9U enclosure: 34.5 kg
Dimensions (D x W x H)	840 x 570 x 1300 mm (cabinet with caster wheels)	19" subrack: 630 x 485 x 405 mm 9U enclosure: 630 x 530 x 485 mm

The PG-DCS05B-15 is an extension to the -9 version. It includes additional frequencies that enable testing according to the DCS05.B (Below Decks) and the MIL-STD 461 CS116.

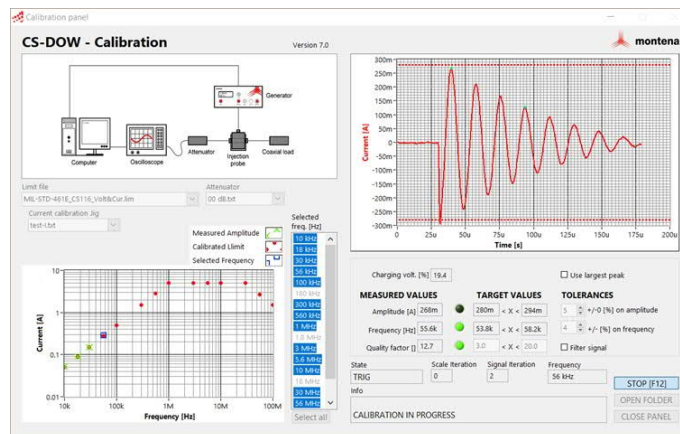
Test frequencies and currents

Generator Type	DEF STAN 59-411 PART 3 DCS05.B		MIL-STD 461 CS116
	PG-DCS05B-100A	PG-DCS05B-9	----- PG-DCS05B-15 ¹⁾ -----
Frequency	Output current into 10 Ω	Output current into 10 Ω	Output current into 100 Ω
10 kHz	-	-	0.1 A
30 kHz	-	-	0.3 A
100 kHz	-	-	1 A
300 kHz	-	-	3 A
500 kHz	100 A	25 A	5.6 A
1 MHz	100 A	25 A	10 A
2 MHz	100 A	25 A	10 A
3 MHz	100 A	25 A	10 A
5 MHz	100 A	25 A	10 A
10 MHz	100 A	25 A	10 A
15 MHz	67 A	16.75 A	10 A
30 MHz	-	-	10 A
35 MHz	40 A	7.25 A	-
50 MHz	40 A	5 A	-
100 MHz	-	-	3 A

¹⁾ In addition to the 6 basic frequencies specified in the MIL-STD 461 CS116 (values in bold), the PG-DCS05B-15 includes 7 extra frequencies which allows a better excitation of the resonances of the equipment under test over the frequency ranges 10 kHz to 100 MHz. The damping (Q) factor is between 10 and 20 for all CS116 frequencies.

Automation software

The transient generator and the measurement equipment are controlled by a dedicated software application which automatically calibrates the setup according to standard or user defined injection levels, set the applied perturbation levels, collect the measured data and generates the calibration and test reports.



Ordering information

TYPE	DESCRIPTION
PG-DCS05B-100A	Pulse generator for DEF-STAN 59-411 DCS05.B, All Land and Sea Services equipment (Below Decks and Above Decks), output current : up to 100 A, 9 test frequencies, with 19" cabinet
PG-DCS05B-9	Pulse generator for DEF-STAN 59-411 DCS05.B, Sea Services equipment Below Decks, output current : up to 25 A, 9 test frequencies, 19" 9U rack version
PG-DCS05B-15	Pulse generator for DEF-STAN 59-411 DCS05.B Sea Services equipment Below Decks and MIL-Std 461 D/E/F/G CS116, 15 test frequencies, 19" 9U rack version

Related products / accessories

TYPE	DESCRIPTION
IPDN150ACC	Inductive coupler for short pulses and damped oscillatory waveform injection, frequency range: 4 kHz - 400 MHz, peak current max 75 A into 50 ohm load, internal diameter : 40 mm
CJDN150ACC	Calibration jig for the injection probe IPDN150ACC
IPDR250	Current injection probe, frequency range: 10 kHz - 400 MHz, internal diameter : 43 mm
CJDR250	Calibration jig for the injection probe IPDR250
SW-CS-DOW	Windows-based control software application, for montena damped oscillatory wave generators