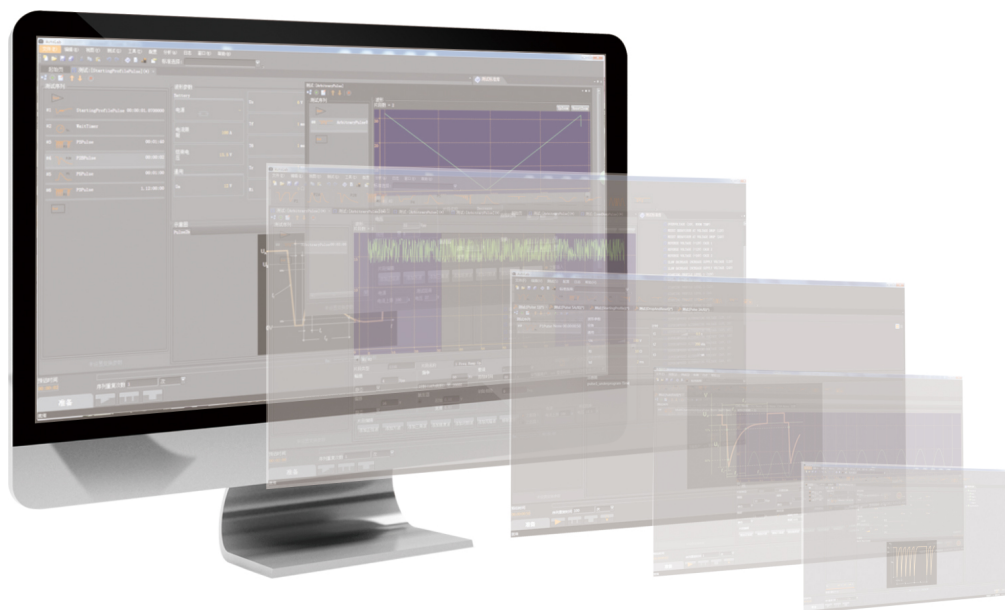


AutoLab Automotive Immunity Test Software



Introduction

AutoLab is the supporting software of the automotive electronic conducted immunity test system, and the software and hardware together constitute the entire test system, which can complete the transient conducted immunity and multi-channel power supply waveform simulation waveform test functions.

AutoLab can provide predefined test parameters with reference to relevant standards, and provide hundreds of test waveforms of international standards and manufacturer standards, which is very convenient for users. Automate the test sequence to realize remote one-click test operation, making the operation easier.

Characteristics

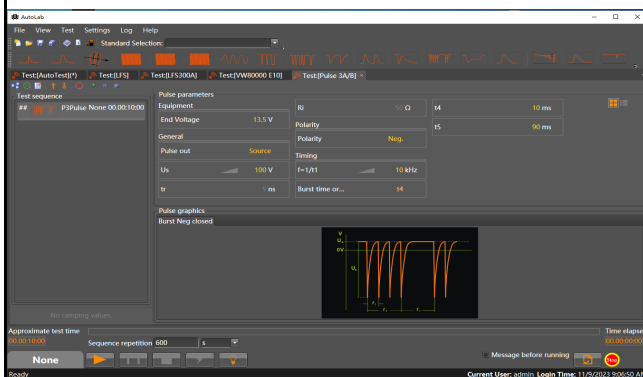
- > Compatible with Windows 7, Windows 8, Windows 10 and Windows 11 operating system;
- > Support the Ethernet interface;
- > Can control APS & APG series, TIS series, LDS series, PAWG series equipment;
- > Support for most international standards and manufacturer standards and previous versions of the standards;
- > Support for the oscilloscope (.csv) Import and conduct the test data;
- > Powerful scheduling and test sequence, one-click remote control test;
- > Support single test / sequence test report export, support user-defined test report template;
- > Emergency stop function, one-click control, make the test more safe.

Application Areas

- > Custom programming of various standard waveform formats;
- > Multi-channel waveform arbitrary editing;
- > Support parameter scheduling test, test sequence, one-key test, simple operation;
- > Support the export of the test report, convenient for users to record real-time data;
- > Intuitive device configuration and management interface, the connection status at a glance;
- > The preservation and loading function of the waveform can manage the saved waveform;
- > Standard library, equipment support update.

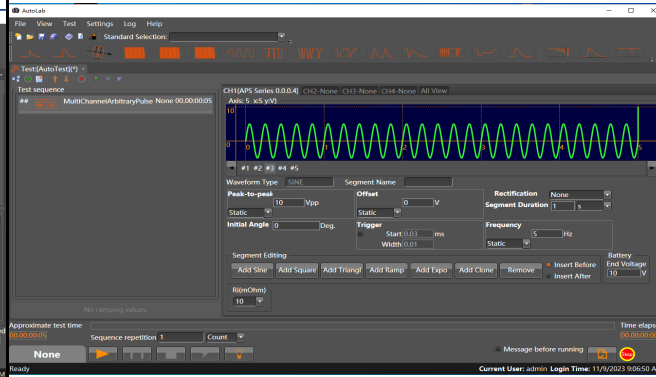
Detailed Introduction

Multi-window graphical UI:



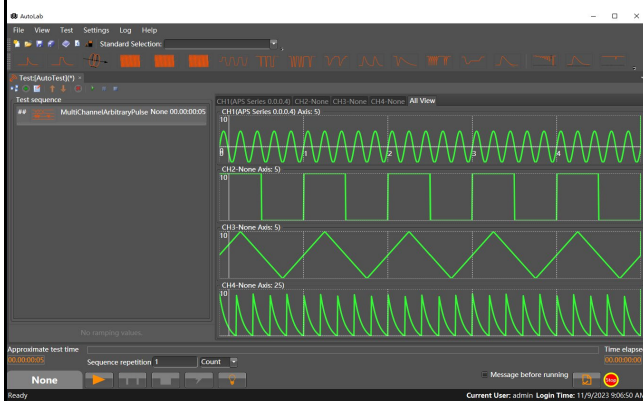
Support to open multiple test editing Windows at the same time, each window is set independently, with the waveform legend, the meaning of parameters is clear at a glance.

Custom programming in a variety of standard waveform formats:



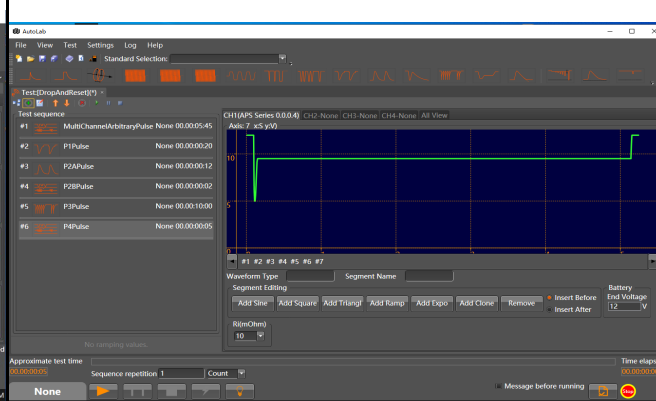
Support DC waveform, Harmonic, Sine wave, Sweep wave, Triangular wave, Square wave, Index wave, Frequency modulation / Amplitude modulation (FM/AM) sine wave standard waveform section, can customize the above standard section wave form into irregular wave irregular arbitrary wave test, fully discover the performance of the instrument, provide great scalability.

Multi-channel waveform arbitrary editing:



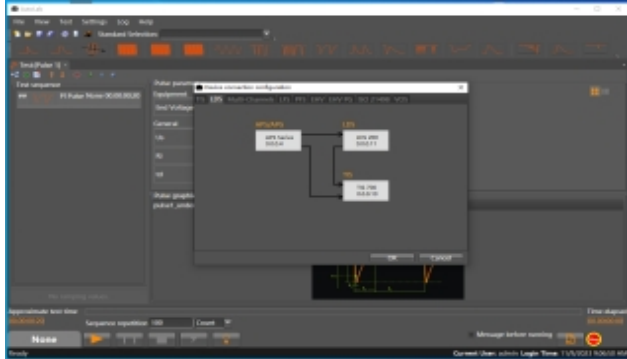
At present, the waveforms of automobile testing are becoming more and more complex. Although the single phenomenon simulation in the standard is still being tested, the whole vehicle or parts in the real environment is more valued. Ordinary waveform generator cannot meet these requirements, especially when multiple tests are required to add in one test, Autolab is a better choice, Autolab can control the four-channel signal generator to stack four different voltage waveforms on one test article for testing.

Support parameter scheduling test, test sequence, one-key test, simple operation:



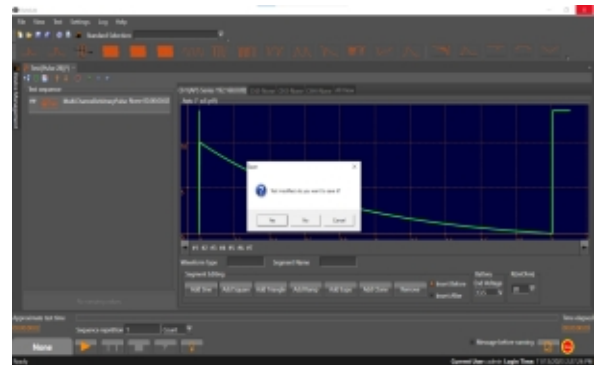
Multiple test steps can be added to a test, which is convenient for users to conduct a series of experiments on a test product to realize one-key test and simple operation. For the test parameters, Autolab also supports the scheduling and setting of multiple parameters to realize the iterative testing of the parameters and avoid frequently setting the parameters.

- Intuitive device configuration and management interface, the connection status at a glance:



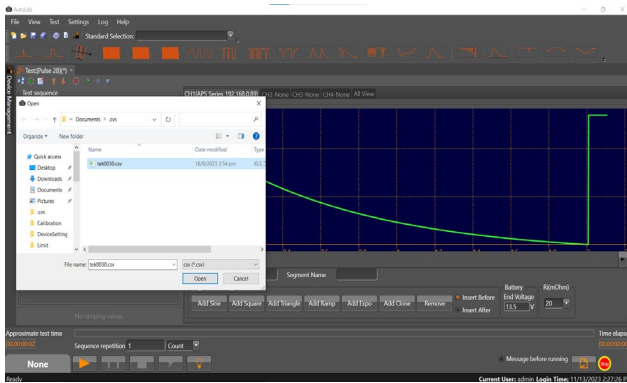
All the equipment information is displayed in the separate configuration interface, and the connection status is clear at a glance. After the configuration, there is no need to select the equipment for each test, and the system will complete the test according to the configured equipment information.

- The preservation and loading function of the waveform can manage the saved waveform:



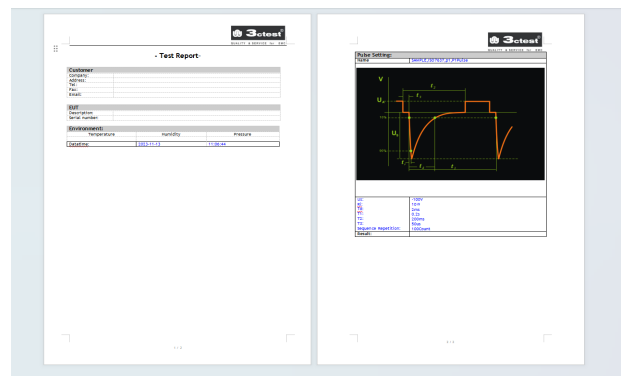
Autolab Standard libraries or custom programmed waveforms can be saved, and these saved files can also be loaded; Autolab, the user can customize the specified folder name and save the file name for management and testing again.

- Oscilloscope format (. CSV) data for import and testing:



Supports reading the oscilloscope export format (. csv) file, users can also establish the waveform data file in Excel, after the system read (.csv) file, the corresponding waveform diagram is displayed on the interface, and the user can set the parameters and run the test.

- Supports the export of test reports for users to record real-time data:



The default report header information can be set or the user can edit the test report template according to their actual business needs and the operation instructions and examples. After the test, the report with experimental data is automatically generated. And the user can also generate the report at any time to record some information during the test.

List of Supported Standard Library

> Asea EP455 2003.02	> ECE R10 Rev4, 2012-04
> BMW BMW N 600 13.0 T1	> ECE R10 Rev 5, 2014.10
> BMW BMW N 600 13.0 T2	> ECE/R10.6 Nov. 2019
> BMW GS 95002	> FIAT 7-Z0441 2008.04
> BMW GS 95002 2004.10	> FIAT 7-Z0444 2008.04
> BMW GS 95002 2010.06	> FIAT 9.9011 Rev. 13, 2007.03
> BMW GS 95003-2	> FIAT 9.90110
> BMW GS 95003-2 2007.03	> Ford EMC-CS-2009 rev1
> BMW GS 95003-2 2010.01	> Ford EMC-CS-2009 rev1 CI 220 G1, CI 220 G2
> BMW GS 95024-2-1 2010	> Ford ES-XW7T-1A278-AB 1999.04
> BMW GS 95024-2 2020	> Ford ES-XW7T-1A278-AB 1999.04 CI 240 Load Dump
> BYD QBYDQ-A1901.707.2	> Ford ES-XW7T-1A278-AC OCT 2003
> Case New Holland	> Ford ES-XW7T-1A278-AC Oct 2003 CI 220G
> CHANGAN VS-00.00-T-11019-A1-2015	> Ford ES-W7T-1A278-AB (Update 2006.06) (2003.10)
> CHANGAN VS-00.34-L-10002	> Ford FMC 1278
> CHANGAN VS-00.34-L-10002 2020	> Ford FMC 1278 2015-07
> CHANGAN VS-00.35-L-10008 2018(V2)	> Ford FMC 1278 2016
> CHANGAN VS-00.35-L-10008 2018-12-25(V3)	> FOTON QFPT2800001 2011
> CHERY QSQR E8-4-2019	> GAC QJGAC 1523_029
> China Motor Company ES-X82010 Rev. O, 2005.10	> GBT 21437.2 2008
> CNH ENS0310 03-09	> GBT 21437.2 2021
> CNH ENS0310 Rev. G, 2010.01	> GBT 21437.3 2012
> Daimler Chrysler CS-11809 2009.05	> GBT 21437.3 2021
> Daimler Chrysler CS-11979 2010.07	> GBT 28046.2-2011
> Daimler Chrysler DC-10614 2004-01 A	> GBT 28046.2 2019
> Daimler Chrysler DC-10614 Rev. B, 2005.03	> GEELY J7110982A 2016
> Daimler Chrysler DC-10615 2003-05 A	> GEELY J7111029B 2017
> Daimler Chrysler DC-10615 2004-08 B	> GEELY J7110779C 2017
> Daimler Chrysler DC-10615 Rev. D, 2007.05	> GEELY J7111029C 2020
> Daimler Chrysler DC-11224 2007-05	> GEELY CEVT 8888621495-2 2018
> Daimler Chrysler PF-10540 2001-12	> GEELY Q-JLY J7111029B
> Daimler Chrysler PF-10540 Rev. A, 2003.10	> GEELY Q-JLY J7110779D
> Daimler Chrysler PF-10541 Rev. A, 2003.12	> GEELY QJLY J7111029D 2022
> Daimler Chrysler PF-9326 Change C 1999.12	> GEELY Q-JLY-J7110779B 2014
> DongFeng EQCS-1204-2017	> General Motors GM9105P 1996.11
> DongFeng QDFXK 323-2016	> General Motors GM9117P 1993.05
> DongFeng Q LQB C-208-2019	> General Motors GM9123P 1997.01
> DongFeng QDH-YA07-01-2019	

List of Supported Standard Library

> General Motors GMW 3097 2004.02	> ISO 7637-4 2019
> General Motors GMW 3097 2006.07	> ISO 7637-4 2020
> General Motors GMW 3097 (Rev. 6, 2012.04)	> ISO 21780 2019
> General Motors GMW 3097 2015.06	> ISO 21780 2020
> General Motors GMW 3100 2000.02	> ISO/FDIS 21780 2020 E
> General Motors GMW 3172 2001.12	> ISO/DIS 11452-8 2015-06
> General Motors GMW 3172 2008.08	>ISO 14708-3
> General Motors GMW 3172 2010.07	> IVECO 16-2101 2006.4
> General Motors GMW 3172 2012 9.2.18	> JA 3700-93C-1
> General Motors GMW 3172 2014.10	> Jaguar / Land Rover JLR-EMC-CS Version 1.0,
> General Motors GMW 3172 2015.06	Am 4 2015-02
> General Motors GMW 3172 2018	> JA 3700-MH-3 2021
> General Motors GMW 3172 2022-11	> JA 3700-MH-4 2021
> General Motors BT-SGMWJ 08244.9-2018	> JASO D001 A-2, B-2, D-2
> GOST 28751-90 1990	> JASO D001 1994 A-1, B-1, D-1, E
> GOST 33991-2016	> JASO D014-2 2014.03
> GreatWall GWT A D01-01 2020-09	> JIDU QJIDU 0019-2022
> GreatWall GWT A D05-02	> John Deere JDQ 53.3 2005.10
> GreatWall	> KARMA C1800STA0131 Rev2
> HARMAN	> Mazda MES PW 67600
>HeZhong QTHZ E8-4	> Mazda MES PW 67602 D
> Hyundai Kia ES-95400-10 Rev. A, 2003.10	> Mazda MES PW 67602 Nov.2015
> Hyundai Kia ES 96200-00 REV K 2011-11 P5b	> Mazda MES PW 67602 2019
> ISO 16750-2 2000.11	> Mercedes LV 123
> ISO 16750-2 2006	> Mercedes MBN 11123 2019-10
> ISO 16750-2 2010	> Mercedes MBN 10284-2 2002
> ISO 16750-2 2012	> Mercedes MBN 10284-2 2008
> ISO 16750-2 2023	> Mercedes MBN 10284-2 2011
> ISO 21498-2 2021	> Mercedes MBN 10284-4 2011
> ISO 21848 2005	> Mercedes MBN 10615 2009.09
> ISO 7637-1 1990-06	> Mercedes MBN 22100-2 1999
> ISO 7627-2 1990	> Mercedes MBN LV 124-1 2011.03
> ISO 7637-2 1999.02	> Mercedes MBN LV 124-1 2013.03
> ISO 7637-2 2004	> Mercedes MBN LV 148 2013-11
> ISO 7637-2 2011	> MFA2 PACK EMC TestSpec V1.0
> ISO 7637-2 2016.11	> Mitsubishi ES-X82010 Rev. O, 2001.12
> ISO 7637-2 2021	> Mitsubishi ES-X82114 2009.03
> ISO 7637-3 2007.07	> Mitsubishi ES-X82115 2009.03
> ISO 7637-3 2016	> NEXTEV Voltage Specification Ver1.0 2015
> ISO 7637-4 2017	> NEXTEV NIO-TP.20.007

List of Supported Standard Library	
> NEXTEV E10 E13	> SAE J1113-12 1994.12
> Nissan 28400 NDS03 [3] 2005.08	> SAE J1113-22 2003.11
> Nissan 28400 NDS02 [3] 1999.07	> SAE J1455 for trucks 1994-07
> Nissan 28400 NDS 03 B-2	> SAE J1113-11 2012.01
> Nissan 28400 NDS 03_2A 1997-01 A-1, A-2,	> SAE J1455 2006.06 P5
B-1	> SAE J1455 2017-03
> Nissan 28400 NDS 07 C300	> SAE J 2139 2005.09
> Nissan 28400 NDS 07 C50	> SAE J2628 2007.07
> Nissan 28400 NDS 07 C8	> Ssangyong SES E 922 2008.05
> Nissan 28401 NDS02 [4] 2008.08	> SCANIA TB1400 P5
> Nissan 28401 NDS 02 [5] 2010	> SCANIA TB1700 P5
> Nissan 28401 NDS 02 [6] 2013-01	> SCANIA TB1901 P5
> Nissan 28401 NDS 02 [8] 2016-07	> SMTC 3800001 2014
> Nissan EMC1_RNDS-C-00517_4	> SMTC 3800001 2017
> Nokia Proprietary	> TianJi QDK TE 4601-2019
> NIO TP.20.003-2019(Version2.1)	> Toyota TSC0506G 2019
> Peugeot B21 7090 Nov 1993	> Toyota TSC7001G Rev. 7, 2009.01
> Peugeot B21 7090 1998.01	> Toyota TSC7034G 2010.09 P5
> Peugeot B21 7110 2001	> Toyota TSC7034G 2019
> Peugeot B21 7110 2005	> UN ECE TSC7034G 2019
> Peugeot B21 7110 2008.07	> VDA 320 2015.01
> Peugeot B21 7110 F Apr. 2019	> VG 96916-5 2013.08
> Peugeot B21 7110 Step 2015	> VG 96916-5 2013.08
> PSA B21 7110 Rev. D 2012-10	> VM Motor QWM J073013A-2019
> Porsche EMV Lastenheft 2005.04 P5	> Volkswagen TL 82066 2001.09
> QCT 727 2007	> Volkswagen TL 82066 2004.10
> QDH-YA07-01-2019	> Volkswagen TL 82066 2006.11
> Q/DK TE 4601 2019	> Volkswagen TL 82366 1994.03
> Renault 36-00-400 1998	> Volkswagen VW 80000 2009.10
> Renault 36-00-808 2004	> Volkswagen VW 80000 2013 E15
> Renault 36-00-808--K 2009.03	> Volkswagen VW 80000 2013.06
> Renault 36-00-808--L 2010.12	> Volkswagen VW 80000 2017
> Renault 36-00-808--M 2012.07	> Volkswagen VW 80101 2006.10
> Renault 36-00-808--N Mar. 2016	> Volkswagen VW 80101 2009.03
> SAE J1113-2 1996	> Volkswagen VW80300 Oct 2016
> SAE J1113-11 1995.06	> Volkswagen VW80300 2021
> SAE J1113-11 2000.03	> Volkswagen VW TL 81000 2018
> SAE J1113-11 Rev.5, 2007.06	> Volkswagen VW 80000 2021-01
> SAE J1113-11 Dec 2018	
> SAE J1113-12 2006.08	

List of Supported Standard Library

- > Volkswagen OBD+Funktionsprüfung+V8
- > Volvo STD 515-0003 Ver.4 2009.10 P5b
- > Volvo STD 515-0003 Feb. 2017
- > YAMAHA
- > Empty high-pressure arbitrary pulse
- > Pulse 2c

List of support equipment

■ APG Series

APG 40C40

APG 40C50

APG 40C60

APG 60C40

APG 60C50

APG 60C60

APG 60C80

APG 60C100

■ APS Series

APS 40C05

APS 40C05D

APS 40C10

APS 40C15

APS 40C15D

APS 40C20

APS 40C20D

APS 40C30

APS 40C30D

APS 40C30SD

APS xxDRS

APS 40E05D

APS 40E10D

APS 40E15D

APS 40E20D

APS 40E30D

APS 40E50D

APS 40E100D

APS 40F05D

APS 40F10D

APS 40F15D

APS 40F20D

APS 40F30D

APS 40F50D

APS 40F100D

APS 40G05D

APS 40G10D

APS 60H30D

APS 60H10D

APS 40G15D

APS 40G20D

APS 40G30D

APS 40G50D

APS 40G100D

APS 60C10

APS 60C20

APS 60C30

APS 60C60D

APS 60C100D

APS 60E05D

APS 60E10D

APS 60E15D

APS 60E20D

APS 60E30D

APS 60E50D

APS 60E100D

APS 60F05D

APS 60F10D

APS 60F15D

APS 60F20D

APS 60F30D

APS 60F50D

APS 60F60D

APS 60F100D

APS 60G05D

APS 60G50DR

APS 60G10D

APS 60G15D

APS 60G20D

APS 60G30D

APS 60G50D

APS 60G100D

APS 60H05D

APS 60H15D

APS 60H50D

APS 60H100D

APS 80C100D

APS 80D100DR

List of support equipment	
APS 80E05D	LDS 200N50D
APS 80E10D	LDS 200N75D
APS 80E15D	LDS 200N100D
APS 80E20D	LDS 200N200D
APS 80E30D	LDS 300N30D
APS 80E50D	LDS 300N50D
APS 80E100D	LDS 300N75D
APS 80F05D	LDS 300N100D
APS 80F10D	LDS 500P
APS 80F15D	■ LFS Series
APS 80F20D	LFS 300A
APS 80F30D	LFS 300B
APS 80F50D	LFS 300C
APS 80F100D	LFS 800
APS 80G05D	■ PFS Series
APS 80G10D	PFS 6030A
APS 80G15D	PFS 60xxA
APS 80G20D	PFS 60xxA1
APS 80G30D	PFS 10060D
APS 80G50D	■ PAWG Series
APS 80G50DR	PAWG 100D
APS 80G100D	PAWG 100F
APS 80H05D	AWG 100D
APS 80H10D	AWG 100F
APS 80H15D	■ TIS Series
APS 80H20D	TIS 500P
APS 80H30D	TIS 700
APS 80H50D	TIS 700S
APS 80H100D	TIS 700-60
APS 80I05D	TIS 700-100
APS 80I10D	TIS 700-200
APS 80I15D	TIS 700-100S
APS 80I20D	TIS 100C06
APS 80I30D	■ VOS Series
APS 80I50D	VOS 16C03
APS 80I100D	■ RSG Series
■ LDS Series	RSG xxCxx
LDS 200	
LDS 200N100	
LDS 200N30D	

List of support equipment

■ EVTS Series

EVTS 150C10

EVTS 150C30

LDV 21498

PSB 11500-60

■ EVPG Series

EVPG 20

■ EVDG Series

EVDG 20

■ HTS Series

HTS 150C30

■ AN Series

AN 150C30



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