Test Equipment Solutions Datasheet

Test Equipment Solutions Ltd specialise in the second user sale, rental and distribution of quality test & measurement (T&M) equipment. We stock all major equipment types such as spectrum analyzers, signal generators, oscilloscopes, power meters, logic analysers etc from all the major suppliers such as Agilent, Tektronix, Anritsu and Rohde & Schwarz.

We are focused at the professional end of the marketplace, primarily working with customers for whom high performance, quality and service are key, whilst realising the cost savings that second user equipment offers. As such, we fully test & refurbish equipment in our in-house, traceable Lab. Items are supplied with manuals, accessories and typically a full no-quibble 1 year warranty. Our staff have extensive backgrounds in T&M, totalling over 150 years of combined experience, which enables us to deliver industry-leading service and support. We endeavour to be customer focused in every way right down to the detail, such as offering free delivery on sales, presenting flexible technical + commercial solutions and supplying a loan unit during warranty repair, if available.

As well as the headline benefit of cost saving, second user offers shorter lead times, higher reliability and multivendor solutions. Rental, of course, is ideal for shorter term needs and offers fast delivery, flexibility, try-before-you-buy, zero capital expenditure, lower risk and off balance sheet accounting. Both second user and rental improve the key business measure of Return On Capital Employed.

We are based at Aldermaston in the UK from where we supply test equipment worldwide. Our facility incorporates Sales, Support, Admin, Logistics and our own in-house Lab.

All products supplied by Test Equipment Solutions include:

- No-quibble parts & labour warranty (we provide transport for UK mainland addresses).
- Free loan equipment during warranty repair, if available.
- Full electrical, mechanical and safety refurbishment in our 40GHz in-house Lab.
- Certificate of Conformance (calibration available on request).
- Manuals and accessories required for normal operation.
- Free insured delivery to your UK mainland address (sales).
- Support from our team of seasoned Test & Measurement engineers.
- ISO9001 quality assurance.

Test Equipment Solutions Ltd Unit 3 Zodiac House Calleva Park Aldermaston Berkshire RG7 8HN

T: 01183 800 800 F: 01183 800 804

Email: info@TestEquipmentHQ.com Web: www.TestEquipmentHQ.com



High Power DC Electronic Load

63200 Series



DC Electronic Load Model 63200 Series

KEY FEATURES

- Power Rating: 2.6kW, 5.2kW, 6.5kW, 10.4kW, 14.5kW, 15.6kW
- Voltage range: 0~80V/0~500V
- Current range: Up to 1000A
- CC, CR, CV, CP load modes
- Master/Slave paralleling control mode, allow synchronous load control under static and dynamic loading mode
- Dynamic loading: Up to 20kHz
- Only need 1V to draw rated current
- Programmable slew rate, up to 41A/µs

RS-232 GPIB CE

- Measurement: Voltage / Current / Power/ Resistance
- Large LED/LCD display
- External loading waveform simulation
- Short circuit simulation and short circuit current measurement
- Full protection: OP, OC, OV, OT and reverse protection
- Versatile remote controller
- GPIB & RS-232 interfaces

The Chroma Electronic Loads 63200 series are designed for DC power source, power electronic devices and components testing. The high power rating, parallel and synchronization capabilities make them the ideal tool for testing the high power UUT such as SMR,UPS, battery, and fuel cell.

The 63200 series offers 10 different models with power range from 2600 watts to 15600 watts, current from 50A to 1000A and up to 500V input voltage. The 4 load modes setup provide different load simulations for various application occasions. The CC/CR modes are designed to test constant voltage type of power supply. CV mode is used to test battery charger and current source, while CP mode is ideal for battery testing by simulating the real discharge curve.

The 63200 series can draw its rated current under very low voltage (1V typical) even under the highest specified slew rate. This unique feature guarantees the best loading performance to a low voltage power supply. With the unique external waveform simulation and Master /Slave control capability, the 63200 series electronic loads allow users to parallel and synchronize more than one load together from an internal or external loading control signal. This feature provides unlimited load simulation and the possibility of power expansion.

The 63200 series also supply necessary measurement functions and short circuit simulation that extend the test capability for even the most demanding engineering tests and ATE applications. With the LCD display and rotary knob, the 63200 electronic loads offer versatile front panel operations. Users are able to control the 63200 family remotely via GPIB, RS-232 or APG (Analog Programming) interface.

Chroma 63200 series loads are built in fan speed control to minimize the audio noise. The self-diagnosis routine and the full protections against OPP, OCP, OVP, OVP, and reverse polarity ensure the best quality and reliability.

ECIFICATIONS-1								
Vlodel	632	201	63202		63203			
Power*1	260W	2600W	260W	2600W	520W	5200W		
Current	0~30A	0~300A	0~5A	0~50A	0~60A	0~600A		
/oltage	0~{	30V	0~5	00V 00	0~80V			
Vin Operating voltage	0.5V @ 15A	0.5V @ 150A	1.25V @ 2.5A	1.25V @ 25A	0.5V @ 30A	0.5V @ 300A		
win. Operating voltage	1V @ 30A	1V @ 300A	2.5V @ 5A	2.5V @ 50A	1V @ 60A	1V @ 600A		
Constant Current mode								
Range	0~30A	0~300A	0~5A	0~50A	0~60A	0~600A		
Resolution	7.5mA	75mA 🥢	1.25mA	2012.5mA	15mA	150mA		
ccuracy	0.1%+0.1%F.S.	0.2%+0.1%F.S.	0.1%+0.1%F.S.	0.2%+0.1%F.S.	0.1%+0.1%F.S.	0.2%+0.1%F.S.		
Constant Resistance Mode				of all				
lange	0.005~20ohm	0.25~1000ohm	0.25~1000ohm	<10~400000hm	0.0025~10ohm	0.125~500ohm		
lesolution	12bits	12bits	12bits	12bits	12bits	12bits		
ccuracv*2	0.6mho+0.35%	0.9mho+0.1%	0.012mho+0.35%	0.04mho+0.1%	1.2mho+0.35%*4	1.2mho+0.1%		
ccuracy*3 (Vin>7V)	0.6mho+0.35%	0.012mho+0.35%	0.012mho+0.35%	112.5u mho+0.35%	1.2mho+0.35%	0.024mho+0.35%		
onstant Voltage mode			10 01					
ange	0~16V	0~80V	0~125V	0~500V	0~16V	0~80V		
esolution	4mV	20mV	S31mV	125mV	4mV	20mV		
ccuracy	0.05%+0.1%ES	0.05%+0.1%ES	0.05%+0.1%ES	0.05%+0.1%ES	0.05%+0.1%ES	0.05%+0.1%ES		
onstant Power mode	0.00 /010/1//010/	0.00701011701101			0.00 /010/1 /01/01	0.00 /01011 /01101		
	0.6~260W	6~2600W	0.625~260W	6.25~2600W	1.2~520W	12~5200W		
esolution	7 5mW	75mW	3 125mW	31.25mW	22 5mW	225mW		
couracy	0.5%+0.5%ES	0.5%+0.5%ES	0.5%+0.5%ES	0.5%+0.5%ES	0.5%+0.5%ES	0.5%+0.5%ES		
vnamic mode	0.070+0.0701.0.	0.07010.0701.0	0.070+0.0701.0.	0.370+0.3701.0.	0.070+0.0701.0.	0.070+0.0701.0.		
imina		and and a						
18.T2	0.025-10ms	1ms_30s	0.025-10ms	1ms30s	0.025-10ms	1ms_30s		
solution	110	1mc	10020~10113	1ms	110	1113~503		
	1us 100ppm	100nnm	1µs	1ms 100nnm	1us 100ppm	1mc 100nnm		
ow rate	EmA 1.254/up	E0mA 12 EA/up	0.9mA 0.2A/uo	9mA 2A/up	10mA 2.5A/up	100mA_25A/up		
tw Idlt	SIIIA~1.23A/µS	SUITA~12.3A/µS	0.000 /up	OIIIA~2A/µS	10mA/up	100mA/up		
in Riss Time	DITIA/µS DUTIA/µS		24us (typical)		24us (typical)			
	24µ5 (I	(ypical)	24μ3 (ypical)	24µ3 (typical)			
	0.004	0.0004	0.54	0.504	0.004	0.000		
ange	U~3UA	U~300A	1.05A	U~50A	U~0UA	U~0UUA		
esolution	Amc. /	/5MA						
	0.4%F.S. 0.4%F.S. 0.4%F.S.							
easurement								
oltage Read Back	0.401/	0.001/		0.5001/	0.401	0.001/		
ange	U~16V	U~8UV	U~125V	U~500V	U~16V	U~8UV		
solution	15Dits	15Dits	15Dits	15Dits	15bits	15bits		
ccuracy	0.05%+0	1.05%F.S.	0.05%+0	.05%F.S.	0.05%+0	.05%F.S.		
urrent Read Back	0.001	0.0001	0.51	0.501	0.001	0.0001		
ange	0~30A	0~300A	0~5A	0~50A	0~60A	0~600A		
esolution	15bits	15bits	15bits	15bits	15bits	15bits		
ccuracy	0.1%+0	1.1%F.S.	0.1%+0.1%F.S.		0.1%+0.1%F.S.			
ower Read Back								
ange	0~260W	0~2600W	0~260W	0~2600W	0~520W	0~5200W		
esolution	15bits	15bits	15bits	15bits	15bits	15bits		
ccuracy	0.3%+0.3%F.S.		0.3%+0.3%F.S.		0.3%+0.3%F.S.			
eneral								
hort Circuit								
urrent	30A	300A	5A	50A	60A	600A		
imension (H x W x D)	177 x 440 x 589 mm / 6.9 x 17.3 x 23.2 inch		177 x 440 x 589 mm / 6.9 x 17.3 x 23.2 inch		353 x 440 x 589 mm / 6.9 x 17.3 x 23.2 inch			
/eight	30 kg / 6	66.08 lbs	30 kg / 66.08 lbs		62 kg / 136.56 lbs			
			CE		CE			

Power Supply Test Fauinmen

High Power DC Electronic Load

63200 Series

SPECIFICATIONS-2									
Model	63	204	63	205	63206				
Power*1	520W	5200W	650W	6500W	1040W	10400W			
Current	0~10A	0~100A	0~18A	0~180A	0~60A	0~600A			
Voltage	0~500V		0~	80V	0~80V				
	1.25V @ 5A	1.25V @ 50A	0.5V @ 9A	0.5V @ 90A	0.5V @ 30A	0.5V @ 300A			
Min. Uperating voltage	2.5V @ 10A	2.5V @ 100A	1V @ 18A	1V @ 180A	1V @ 60A	1V @ 600A			
Constant Current mode									
Range	0~10A	0~100A	0~18A	0~180A	0~60A	0~600A			
Resolution	2.5mA	25mA	4.5mA	45mA	15mA	150mA			
Accuracy	0.1%+0.1%F.S.	0.2%+0.1%F.S.	0.1%+0.2%F.S.	0.1%+0.2%F.S.	0.1%+0.2%F.S.	0.1%+0.2%F.S.			
Constant Resistance Mode	istant Resistance Mode								
Range	0.125~500ohm	5~20000hm	0.008~32ohm	0.4~1600ohm	0.0025~10ohm	0.125~500ohm			
Resolution	12bits	12bits	12bits	12bits	12bits	12bits			
Accuracy*2	0.24mho+0.1%	0.08mho+0.1%	0.375mho+0.35%	0.75mho+0.1%	1.2mho+0.35% *4	1.2mho+0.1%			
Accuracy*3 (Vin>7V)	0.24mho+0.1%	225u mho+0.35%	0.375mho+0.35% 0.075mho+0.35%		1.2mho+0.35%	0.024mho+0.35%			
Constant Voltage mode									
Range	0~125V	0~500V	0~16V	0~80V	0~16V	0~80V			
Resolution	31mV	125mV	4mV	20mV	4mV	20mV			
Accuracy	0.05%+0.1%F.S.	0.05%+0.1%F.S.	0.05%+0.1%F.S.	0.05%+0.1%F.S.	0.05%+0.1%F.S.	0.05%+0.1%F.S.			
Constant Power mode									
Range	1.25~520W	12.5~5200W	0.36~650W	3.6~6500W	1.2~1040W	12~10400W			
Resolution	6.25mW	62.5mW	4.6mW	46mW	22.5mW	225mW			
Accuracy	0.5%+0.5%F.S.	0.5%+0.5%F.S.	0.5%+0.5%F.S.	0.5%+0.5%F.S.	0.5%+0.5%F.S.	0.5%+0.5%F.S.			
Dynamic mode									
	0.005 10mg	1ma 20a	0.005 10mg	1ma 20a	0.005 10mg	1ma 20a			
I I & I Z	0.020~101115	11115~305	0.025~10118		0.020~101115	1111S~3US			
Accuracy	1µs 1µs 100ppm	11115 1mc (10000m	1µs	1mg 100mm	1μς 100ppm	100nnm			
Accuracy Slow rate	1.6mA_0.4A/us	16mA_4A/us	2mA_0.75A/us	20mA 7.5A/up	10mA 24/up	100mA_25A/up			
Diew Idle	1.000A~0.4A/µS	16m//us	2mA/us	20m//us	12mA/us	100mA/us			
Min Rise Time	1.0111A/µ5 2/lue (TUTIA/µS			20us (typical)				
Current	۵ د بابع	sploal)		(ypical)	2003 ((ypiour)			
Ranne	0~10A	0~100A	0~18A	0~180A	0~60A	0~600A			
Resolution	2 5mA	25mA	4.68mA	46.8mA	15mA	150mA			
Accuracy	0.49	6ES	0.4%ES		0.4%ES				
Measurement	0.17			No. Contraction of the second se	0.17				
Voltage Read Back			195° N'						
Range	0~125V	0~500V	0~16V	0~80V	0~16V	0~80V			
Resolution	15bits	15bits	15bits	15bits	15bits	15bits			
Accuracy	0.05%+0.05%F.S.		0.05%+0.05%F.S.		0.05%+0.05%F.S.				
Current Read Back									
Range	0~10A	0~100A	0~18A	0~180A	0~60A	0~600A			
Resolution	15bits	15bits	15bits	15bits	15bits	15bits			
Accuracy	0.1%+0	1.1%F.S.	0.1%+0	D.1%F.S.	0.1%+0).1%F.S.			
Power Read Back		Cr. O							
Range	0~520W	0~5200W	0~650W	0~6500W	0~1040W	0~10400W			
Resolution	15bits	15bits	15bits	15bits	15bits	15bits			
Accuracy	0.3%+0.3%F.S.		0.3%+0.3%F.S.		0.3%+0).3%F.S.			
General									
Short Circuit									
Current	10A	100A	18A	180A	60A	600A			
Dimension (H x W x D)	353 x 440 x 589 mm /	13.9 x 17.3 x 23.2 inch	353 x 440 x 589 mm / 13.9 x 17.3 x 23.2 inch		443.7 x 440 x 589 mm / 17.5 x 17.3 x 23.2 inch				
Weight	62 kg / 1	36.56 lbs	62 kg / 136.56 lbs		90 kg / 198.24 lbs				
Safety & EMC	C	E	CE		CE				

Soft Panel



Battery Discharge Test



63200 Series DC Electronic Load Family



High Power DC Electronic Load

63200 Series

SPECIFICATIONS-3									
Model	63207		63208		63209		63210		
Power *1	1040W	10400W	1560W	15600W	1560W	15600W	1450W	14500W	
Current	0~30A	0~300A	0~60A	0~600A	0~100A	0~1000A	0~15A	0~150A	
Voltage	0~80V		0~80V		0~80V		0~500V		
	0.5V @ 15A	0.5V @ 150A	0.5V @ 30A	0.5V @ 300A	0.5V @ 50A	0.5V @ 500A	1.25V @ 7.5A	1.25V @ 75A	
Min. Operating voltage	1V @ 30A	1V @ 300A	1V @ 60A	1V @ 600A	1V @ 100A	1V @ 1000A	2.5V @ 15A	2.5V @ 150A	
Constant Current mode									
Range	0~30A	0~300A	0~60A	0~600A	0~100A	0~1000A	0~15A	0~150A	
Resolution	9.3mA	75mA	15mA	150mA	31.25mA	250mA	3.75mA	37.5mA	
Accuracy	0.1%+0.2%F.S.	0.1%+0.2%F.S.	0.1%+0.2%F.S.	0.1%+0.2%F.S.	0.1%+0.2%F.S.	0.1%+0.2%F.S.	0.1%+0.1%F.S.	0.2%+0.1%F.S.	
Constant Resistance Mode	e	·		^	~	~			
Range	0.005~20ohm	0.25~1000ohm	0.0025~10ohm	0.125~500ohm	0.0015~6ohm	0.075~300ohm	0.083~3330hm	3.3~13200ohm	
Resolution	12bits	12bits	12bits	12bits	12bits	12bits	12bits	12bits	
Accuracy *2	0.6mho+0.35%	0.9mho+0.1%	1.2mho+0.35% *4	1.2mho+0.1%	1.2mho+0.35% *4	1.2mho+0.1%	0.036mho+0.35%	0.092mho+0.1%	
Accuracy *3 (Vin>7V)	0.6mho+0.35%	0.012mho+0.35%	1.2mho+0.35%	0.024mho+0.35%	1.2mho+0.35%	0.024mho+0.35%	0.036mho+0.35%	337.5u mho+0.35%	
Constant Voltage mode		• •							
Range	0~16V	0~80V	0~16V	0~80V	0~16V	0~80V	0~125V	0~500V	
Resolution	4mV	20mV	4mV	20mV	4mV	20mV	31mV	125mV	
Accuracy	0.05%+0.1%F.S.	0.05%+0.1%F.S.	0.05%+0.1%F.S.	0.05%+0.1%F.S.	0.05%+0.1%F.S.	0.05%+0.1%F.S.	0.05%+0.1%F.S.	0.05%+0.1%F.S.	
Constant Power mode				<u> </u>					
Range	0.744~1040W	6~10400W	1.2~1560W	12~15600W	2.5~1560W	20~15600W	5~1450W	50~14500W	
Resolution	9.3mW	75mW	22.5mW	225mW	31.255mW	250mW	25mW	250mW	
Accuracy	0.5%+0.5%F.S.	0.5%+0.5%F.S.	0.5%+0.5%F.S.	0.5%+0.5%F.S.	0.5%+0.5%F.S.	0.5%+0.5%F.S.	0.5%+0.5%F.S.	0.5%+0.5%F.S.	
Dynamic mode									
Timing	iq i i i i i i i i i i i i i i i i i i								
T1&T2	0.025~10ms	1ms~30s	0.025~10ms	1ms~30s	0.025~10ms	1ms~30s	0.025~10ms	1ms~30s	
Resolution	1µs	1ms	1µs	1ms	1µs	1ms	1us	1ms	
Accuracy	1µs+100ppm	1ms+100ppm	1µs+100ppm	1ms+100ppm	1µs+100ppm	1ms+100ppm	1us+100ppm	1ms+100ppm	
Slew rate	6mA~1.5A/µs	50mA~12.5A/µs	12mA~3A/µs	100mA~25A/µs	20mA~5A/µs	166mA~41.6A/µs	3mA~0.75A/µs	25mA~6A/µs	
Resolution	6mA/µs	50mA/µs	12mA/µs 🥢	100mA/µs	20mA/µs	166mA/µs	3mA/us	25mA/us	
Min. Rise Time	20µs (20µs (typical)		20µs (typical)		20µs (typical)		24 µs (typical)	
Current					t to duit				
Range	0~30A	0~300A	0~60A	0~600A	0~100A	0~1000A	0~15A	0~150A	
Resolution	9.37mA	75mA	15mA	150mA	31.25mA	250mA	3.75mA	37.5mA	
Accuracy	0.4%F.S.		0.4%F.S.		0.4%F.S.		0.4%FS		
Measurement				, 40°.	The.				
Voltage Read Back				18 5					
Range	0~16V	0~80V	0~16V	0~80V	0~16V	0~80V	0~125V	0~500V	
Resolution	15bits	15bits	15bits	15bits	15bits	15bits	15 bits	15 bits	
Accuracy	0.05%+0.05%F.S.		0.05%+0.05%F.S.		0.05%+0.05%F.S.		0.05%+0.05%F.S.		
Current Read Back			0	om					
Range	0~30A	0~300A	0~60A	0~600A	0~100A	0~1000A	0~15A	0~150A	
Resolution	15bits	15bits	15bits	15bits	15bits	15bits	15bits	15bits	
Accuracy	0.1%+0).1%F.S.	0.1%+().1%F.S.	0.1%+0).1%F.S.	0.1%+0).1%F.S.	
Power Read Back			On O						
Range	0~1040W	0~10400W	0~1560W	0~15600W	0~1560W	0~15600W	0~1450W	0~14500W	
Resolution	15bits	15bits	15bits	15bits	15bits	15bits	15bits	15bits	
Accuracy	0.3%+0.3%F.S.		0.3%+0.3%F.S.		0.3%+0.3%F.S.		0.3%+0.3%F.S.		
General									
Short Circuit									
Current	30A	300A	60A	600A	100A	1000A	15A	150A	
Dimension (H x W x D)	443.7 x 440 x 589 mm	/ 17.5 x 17.3 x 23.2 inch	762.8 x 546 x 700 mm / 30 x 21.5 x 27.6 inch		762.8x546x700mm/30x21.5x27.6inch(cabinet)		762.8x546x700mm/30x21.5x27.6inch(cabinet)		
Weight	90 kg / 198.24 lbs		170 kg / 374.45 lbs		170 kg / 374.45 lbs		170 kg / 374.45 lbs		
Safety & EMC	C CE CE CE CE CE					E			
Note*1: The power rating specifications at ambient temperature=25°C and see the diagram below for power derating.									

Note*2 : The Vin must be greater that min. operating voltage of each model.

Note 2. The vin must be greater that mint operating voltage of each mode

Note*3 : The Vin must be greater that 7V of each model.

Note*4 : Setting error will be 1% for R<0.005 $\Omega\,$ at CRL range.



ORDERING INFORMATION 63201 : DC Electronic Load 2.6kW/300A/80V

63201 : DC Electronic Load 2.6kW/3004/80V
63202 : DC Electronic Load 2.6kW/50A/500V
63203 : DC Electronic Load 5.2kW/600A/80V
63204 : DC Electronic Load 5.2kW/100A/500V
63205 : DC Electronic Load 5.2kW/100A/500V
63205 : DC Electronic Load 6.5kW/180A/80V
63206 : DC Electronic Load 10.4kW/600A/80V
63207 : DC Electronic Load 10.4kW/600A/80V
63207 : DC Electronic Load 10.4kW/600A/80V
63207 : DC Electronic Load 10.4kW/300A/80V
63208 : DC Electronic Load 10.4kW/300A/80V
63208 : DC Electronic Load 15.6kW/600A/80V

63209 : DC Electronic Load 15.6kW/1000A/80V 63210 : DC Electronic Load 14.5kW/150A/500V A632001 : Remote Controller A632002 : Load Cable 38mm/242A/200cmx2 A632003 : Load Cable 80mm/390A/200cmx2

A632003 : Load Cable 80mm/390A/200cmx2 A632004 : Sync. Link Box for 6330A & 63200 series A632005 : Softpanel for 63200 series



PXI Instruments & Systems

Solar Cell Test Equipm

/ideo & Color

Power Supply Test Equipment