Chroma Systems Solutions, Inc.

63610-80-20 DC Electronic Load Minimum operating voltage.

63600 Family of Electronic Loads

Keywords: DC Electronic Load, 63600, 63610-80-20, minimum voltage, derating

Title:

Measured minimum operating voltage of a 63610-80-20 DC Electronic Load

Product Family: **63600 Family of DC Electronic Loads**

Abstract

Confirm the minimum applied operating voltage to a 63610-80-20 in the High, Middle and Low ranges. The minimum voltage spec is the lowest voltage that can be applied at the Loads terminals and still be able to maintain the maximum current for the range that the load is in.

SPECIFICATIONS									
Model	**63610-80-20**			**63630-80-60**			**63640-80-80**		
Configuration	100Wx2			300Wx1			400Wx1		
Voltage *1 *8	0~80V			0~80V			0~80V		
Current	0~0.2A	0~2A	0~20A	0~0.6A	0~6A	0~60A	0~0.8A	0~8A	0~80A
Power *2	16W	30W	400W	30W	60W	300W	60W	60W	400W
Static Mode									
Typical min. operating	0.5V@0.2A	0.5V@2A	0.5V@20A	0.5V@0.6A	0.5V@6A	0.5V@60A	0.4V@0.8A	0.4V@8A	0.4V@80A

Solution:

Using a Chroma 63610-80- 20 DC Electronic Load and a external power supply Chroma 62006P-30-80 confirm the minimum voltage applied to the load terminals that will still maintain the maximum current of the range the load is in. The following tables show the measured voltage and current in the High, Middle and Low range settings on a 63610-80-20.

Title: # Measured minimum operating voltage of a 63610-80-20 DC Electronic Load

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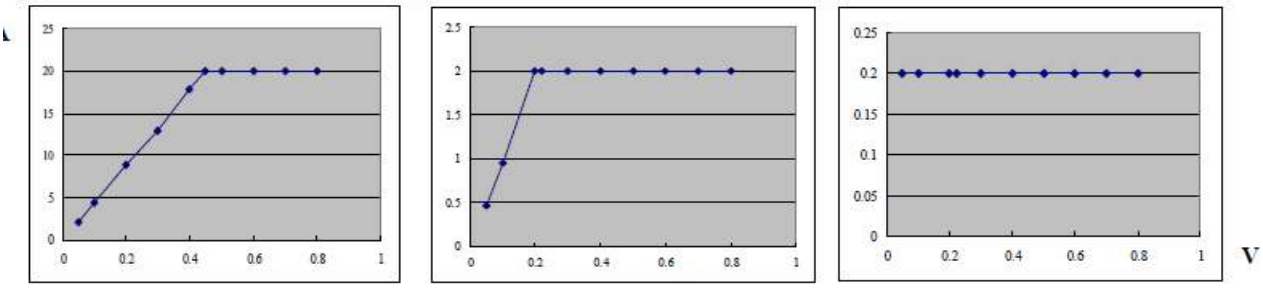
Test Data of Chroma Model 63610-80-20

High Range 20A		Middle Range 2A		Low Range 0.2A	
Voltage (V)	Current (A)	Voltage (V)	Current (A)	Voltage (V)	Current (A)
0.8	20	0.8	2	0.8	0.2
0.7	20	0.7	2	0.7	0.2
0.6	20	0.6	2	0.6	0.2
0.5	20	0.5	2	0.5	0.2
0.45	20	0.4	2	0.4	0.2
0.4	17.754	0.3	2	0.3	0.2
0.3	13	0.222	2	0.222	0.2
0.2	8.95	0.2	2	0.2	0.2
0.1	4.51	0.1	0.948	0.1	0.2
0.05	2.2	0.05	0.46	0.05	0.2



Conclusion:

The 63610-80-20 does meet the specified minimum voltage ratings to maintain the maximum current in each range.