High Power Fiber Laser Power Supply

Silicon carbide (SiC) based High Power Fiber Laser Power Supply (HPFLPS). The design utilizes GE's 1200V SiC MOSFETs packaged in a 2U rack mountable, liquid cooled chassis. The HPFLPS uses GE's Digital Controller technologies to compliment the SiC devices, yielding high power density and reduced weight. Advanced thermal management technologies are employed to enable reliable performance on various platforms.

Features:

- Input Voltage (270 & 650 VDC)
- Powers fiber lasers including Q-Switched types
- RS485 serial communications with unique ID
- Current Mode Efficiency >85%
- Voltage Mode Efficiency >89%
- 8 each 60A Current Source outputs, or
  4 each 5000W Voltage Source outputs
- Liquid cooled: +18-25°C coolant
- Configurable as Current Source or Voltage Source
- 4 Housekeeping Outputs (28V @ 10A)

Physical: (See ICD 1323000)

Weight:	25.6kg (56.5 lbs.)
Dimensions:	19" x 24" x 3.5" (48.3 cm x 61cm x 9cm) (2U per EIA-310)
Volume:	1596 in^3 (26 Liters)
Connector:	Blind Mate Rack Mount or discrete harness
Mounting:	Rack Mountable or Fixed Mount

Environmental:

Operating Temperature:	-45°C to +50°C ambient
Storage Temperature:	-55°C to +70°C
Coolant:	35/65 EGW; +18C to -25C; < 2 GPM
Temperature Shock:	MIL-STD-810E, Method 503.3
Shock	Mil-STD-901
Vibration:	MIL-STD-167-1 Type I
Humidity	Meets exposure to 95% relative humidity

P/N	MODE	INPUT VOLTAGE (VDC)			OUTPUT VOLTAGE (VDC)			OUTPUT CURRENT (AMP)			REGULATION (LINE, LOAD)	CURRENT RIPPLE & NOISE (Pk-Pk)	VOLTAGE RIPPLE & NOISE (%)	NOMINAL OUTPUT POWER (W)	MAX OUTPUT POWER (W)
		Min	Nom	Max	Min	Nom	Max	Min	Nom	Max					
1323000G1	**CURRENT**	604	**650**	683	25V	**40V**	45V	6A	**51A**	55A	**≤3.0%**	1Apk-pk	**≤3.0%**	**16800**	19800
	VOLTAGE				50V	**60V**	75V	0.6A	**70A**	85A	**≤3.0%**	N/A	≤3.0%	**18000**	21600

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