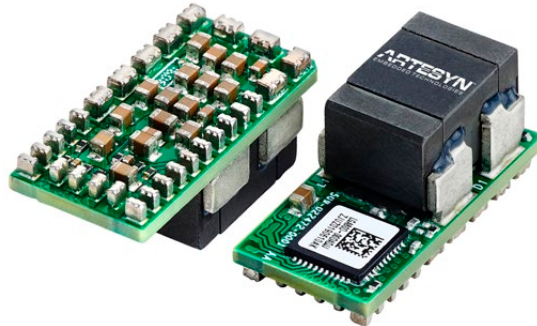


LGA80D Series

Dual O/P Non-isolated 80 A Digital DC/DC Converter

Data Sheet

Total Current: 80 A (single)
40 A (dual)
Input Voltage: 7.5 - 14 Vdc
Variable Output: 0.6 - 5.2 V



SPECIAL FEATURES

- Two-phase design
- Dual or single output configuration possible
- High efficiency up to 95.5%
- Small size 1" x 0.5" x 0.48" (LxWxH)
- Supports PMBus
- No minimum load requirement
- Wide operating temperature range
- Exceptional power density
- Automatic loop compensation
- Excellent transient response
- Analog or digital control
- IPC9592B compliant
- Tape and reel packaging
- Reflow compatible
- Possible to stack up to 8 phases for 320 A
- Two year warranty (Consult factory for extended terms)

SAFETY

- Designed to meet EN60950-1



Electrical Specifications

Input		
Input voltage range	7.5 -14 Vdc	
Max input current @ 7.5 V	33 A	
Input capacitor (internal)	120 μ F	
Environmental and General Information		
Operating ambient temperature	-40 °C to +85 °C	
Storage temperature	-40 °C to +125 °C	
Switching frequency (RSYNC = 23.7 Kohm)	457 kHz typical (can be configured)	
CMTBF Telcordia SR-332, Issue 3, Method 1 Case 1	50 MHours	
Protection		
Overcurrent protection	Refer to application note for detail	
Overvoltage protection	110% Vo nominal	
Overtemperature protection (controller temperature)	120 °C nominal	
Output*		
Independent output 1 and 2	0.6 V to 1 V	40 A
	1.8 V	35 A
	2.5 V	32.5 A
	3.3 V	30 A
	5 V	20 A
Combined output 1 and 2	0.6 V to 1 V	80 A
	1.8 V	70 A
	2.5 V	65 A
	3.3 V	60 A
	5 V	40 A
Efficiency at 11 Vin and 25 °C	1 V @ 80 A	89.9% typical
	1.8 V @ 70 A	93% typical
	2.5 V @ 65 A	94.5% typical
	3.3 V @ 60 A	95% typical
	5 V @ 40 A	95.5% typical
Max output power (Watts)	200 W	

*Output @ Vin = 12 V, Ta = 25 °C, unless otherwise noted

Electrical Specifications (continued)

Parameter	Conditions	Min	Nom	Max
Line regulation 0.6 ~ 1.0 V 1.0 ~ 5.0 V	Measured at remote sense	—	2 mV 0.2%	—
Load regulation 0.6 ~ 1.0 V 1.0 ~ 5.0 V	Measured at remote sense	—	5 mV 0.5%	—
Output capacitor per output (external minimum)	2 x 220 μ F / 6.3 V polymer tan caps (6TPF220M5L or equivalent) 3 x 100 μ F / 6.3 V ceramic caps	—	740 μ F	—
Ripple and noise (with minimum caps) 5 Hz to 20 MHz 0.6 to 1.8 V 2.5 V to 3.3 V 5.0 V	One module one output	— — —	15 mV 25 mV 40 mV	— — —
Ripple and noise (with minimum caps) 5 Hz to 20 MHz 0.6 to 1.8 V 2.5 V to 3.3 V 5.0 V	One module two outputs	— — —	18 mV 35 mV 50 mV	— — —

Ordering Information

Model Number	Input Voltage	Output Voltage Set Point	Output Current	Efficiency
LGA80D-00DADJJ	7.5 - 14 Vdc	See table	80 A max	See table

Block Diagram - One Module One Output

