

### FUNCTIONAL SPECIFICATIONS (CONT.)

DYNAMIC CHARACTERISTICS	Conditions	Minimum	Typical/Nominal	Maximum	Units
Fixed Switching Frequency			320		KHz
Startup Time	Vin On to Vout regulated (100% resistive load)			30	mS
Startup Time	Remote ON to 10% Vout (50% resistive load)			30	mS
<b>Turn-On/Turn-Off</b>					
Turn-On Delay ④				30	mS
Output Voltage Rise Time ⑤				80	mS
Pre-Bias Voltage ⑥				100	%
Turn-On Overshoot ⑦				2	%
Turn-Off Undershoot ⑧				0	%
Dynamic Load Response	1A/μS, 25% of full load change		500	800	μSec
Dynamic Load Peak Deviation	1A/μS, 25% of full load change			±1000	mV
<b>FEATURES and OPTIONS</b>					
<b>Remote On/Off Control</b>					
Enable Logic, ON state		2		5	V
Enable Logic, OFF state	Pin open = OFF	0		0.8	V
Control Pin Shutdown Current				0.5	mA
<b>OUTPUT</b>					
Total Output Power	See Derating		240		W
<b>Voltage</b>					
Nominal Output Voltage	Vin = 12V; Iout = 2.22A	53.658	54.2	54.742	Vdc
Setting Accuracy		-1		1	% of Vnom.
<b>Current</b>					
Output Current Range		0	4.44	4.44	A
Minimum Load			No minimum load		
Current Limit Inception	98% of Vnom., after warmup	4.88		6.2	A
<b>Short Circuit</b>					
Short Circuit Duration (remove short for recovery)	Output shorted to ground, no damage		Hiccup		
Short circuit protection method	Current limiting				
<b>Regulation</b>					
Line Regulation	Vin = min. to max. Vout = nom.			±1	%
Load Regulation	Iout = min. to max. Vin = nom.			±1	%
Ripple and Noise	20 MHz BW, with 0.1μF and 1μF ceramic capacitors, and 100μF output capacitance			500	mV pk-pk
Temperature Coefficient	At all outputs		±0.02		% of Vnom./°C
Maximum Capacitive Loading	Full resistive load	0		1620	μF
<b>Power Good Signal Characteristics ⑨ ⑩</b>					
Output Voltage for PGOOD triggering		50		55	V
Power Good High State Voltage				5	V
Power Good High State Current (into Pin)				10	μA
Power Good low State Voltage				0.8	V
Power Good low State Current (into Pin)				2.5	mA
<b>MECHANICAL</b>					
Outline Dimensions			2.60x 0.69 x 1.25 66x 17.5 x 31.75		Inches mm
Weight			2.2 62		Ounces Grams
Through Hole Pin Diameter			0.025*0.025 0.64*0.64		Inches mm
Through Hole Pin Material			Copper alloy		
TH Pin Plating Metal and Thickness	Nickel subplate Tin overplate		3-7.6 2.54-7.6		μm μm

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ENVIRONMENTAL					
Operating Ambient Temperature Range	No Derating, Full Power, 100 LFM, Vertical mount	-40		80	°C
Storage Temperature	Vin = Zero (no power)	-55		125	°C
Thermal Protection/Shutdown				130	°C
Available airflow					
Io = 4.44A, Ta = 25°C		100			LFM
Electromagnetic Interference (EMI) Conducted, EN55022/CISPR22	External filter required		B		Class
Radiated, EN55022/CISPR22			B		Class
Relative humidity, Operating, non-condensing		10		90	%
Relative humidity, Non-Operating, non-condensing		5		95	%
Altitude (without output derating at 70°C)		4000		10,000	feet
RoHS rating			RoHS-6		

### Notes

- ① Typical at TA = +25°C under nominal line voltage and nominal-load conditions, unless noted.
- ② Devices have no minimum-load requirements and will regulate under no-load conditions.
- ③ External capacitance could be all ceramic or a mix of electrolytic and ceramic.
- ④ a) Period between Vin connection and Vout rising to 10% of final value when Enable signal is existing, or b) Period between Enable signal connection and Vout rising to 10% of final value when Vin is existing.
- ⑤ The output rise time measured from 10% of Vnom to the lower limit of the regulation band with 0% to 100% load and external cap.
- ⑥ The Power supply will start up normally and without any damage under a pre-bias output voltage.
- ⑦ Tested under all loading conditions.
- ⑧ Tested under all loading conditions.
- ⑨ Pgood is referenced to Vin(-). An external pull-up resistor is connected between PGOOD pin and a bias voltage. A high signal shown in the pin represents the good status of the output voltage.
- ⑩ Tested under full operating temperature and input voltage ranges.