

DC to DC Converter Specifications

	Parameter	Notes	Min	Typ	Max	Units
Max ratings	Operating input voltage		10		16	VDC
	Non-operating input voltage	Protected from reverse polarity on the input terminals	-20		30	VDC
	Operating temperature	At the top thermal interface base plate temperature	-40		95	°C
	Operating surge protection	100 ms transient with 1 ms rise time			30	VDC
	Non-operating temperature	Ambient storage temperature	-55		100	°C
	Voltage at on/off input pin		0		1.8	VDC
Input & output characteristics	Operating input voltage range		10	13.2	16	VDC
	Output voltage set point	V _{in} =12V, I _o =30.5A	28.3	28.5	30	VDC
	Total output voltage range	Over sample, line, load, temperature and life	27.6		33	VDC
	Output voltage, ripple and noise	20MHz bandwidth, 10µF tantalum + 10µF ceramic				
	Peak to peak	Full load (resistive)		60	500	mV _{P-P}
	RMS	Full load (resistive)		60	110	mV _{RMS}
	Operating output current range		0		75	A
	Output DC current limit shutdown	Output voltage at which converter shuts down		22		VDC
	Output over-voltage protection	Non-latching	32.7	34.8	37	VDC
	Efficiency at 100% of load			96		%
Efficiency at 50% of load			96.8		%	
Feature characteristics	Switching frequency			400		KHz
	On/off control—unit on	Voltage at on/off pin	8	12	16	VDC
	On/off control—unit off	Voltage at on/off pin	0		1.8	VDC
	Over-temperature shutdown—OTP	Non-latching				
	Base plate temperature			100		°C
	Auto-restart period			500		ms

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