

Electrical characteristics are guaranteed over the max baseplate temperature range (-40 to 105°C), for the full range of input voltage (V_I), and for the full load range ($I_{O\ min}$ to $I_{O\ rated}$) unless otherwise noted. V_I , V_O , and I_O are actual operating conditions, $I_{O\ rated}$ is nominal rating.

Electrical Specifications

18.0-75.0V in; 12.0V/1.25A out

Input Characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V_I	Input voltage		18	48.0	75.0	V
P_{IL}	No load input power	$V_I = V_{I\ nom}$		0.2		W
C_{IN}	Input capacitance (internal)			2.0		μ F
I_I	Input ripple current ❶	$V_I = V_{I\ nom}, I_O = I_{O\ rated}$		60		mA p-p

Output Characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Units
$P_{O\ max}$	Total output power ❷			12		W
$V_{O1\ nom}$	Nominal (factory set) output voltage Output 1		11.88	12.00	12.12	V
$I_{O1\ rated}$	Rated output current Output 1	$T_{Baseplate} = 105^\circ\text{C}$			1.00	A
	Noise and ripple ❸ Output 1	PK-pk, 20MHz bandwidth with a 0.1 μ F ceramic capacitor			50	mV
V_{O1}	Load regulation ❹	From 10% to 100% of rated output current		0.1	0.5	% V_{O1}
V_{O1}	Line regulation ❹	$V_{I\ min}$ to $V_{I\ max}$ $I_O = I_{O\ typ}$		0.1	0.25	% V_{O1}
$I_{O1\ lim}$	Current limit		1.3		A	

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Output Characteristics - continued

Symbol	Parameter	Conditions	Min	Typ	Max	Units
η	Efficiency	$V_i = 12.0\text{ Vdc}$, $I_o = I_{o\ rated}$ (see eff. graph)	84	85		%
t_{on}	Turn-on time	$V_i = 0$ to V_{Inom}		100		mS
	Transient Response	positive or negative step $I_o = 0\%$ to $100\% I_{o\ rated}$ @ $1A/\mu s$ total deviation		2 3	3 4	ms % $V_{O1\ nom}$

Control Signals -Pins

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V_{Out}	Output Voltage	Remote On/Off pin $2.5 < V_c < 5.5$ or open circuit $V_c < 0.8V$		12.0 0		V V
V_{Out}	Output Voltage	Trim Adjust	90		110	%



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Isolation Characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Units
	Input to Output	1500Vdc	10			Mohm
	Output to Baseplate	1500 Vdc	10			Mohm

Notes:

- ❶ Input ripple current measured with no additional external input filtering.
- ❷ Total output power of converter may not be exceeded by the trim function increasing V out. The rated power output is based on the V out measurement obtained at the output power pins multiplied by the output current.
- ❸ Output ripple and noise measured is specified over a 20MHz bandwidth. When testing output ripple it is important to reduce the ground connection for the scope to less than .5". Output ripple measured with a 10 microfarad tantalum decoupling capacitor.
- ❹ Line and Load regulation are measured from the (+) output (pin 3) and the common (pin 5). Measurements should be taken at the pins in order to eliminate variations caused by line loss due to highly resistive connections.
- ❺ Unit requires a 10% minimum load for proper operation within listed parameters. Load regulation is measured form 10% to 100% load.



Figure 1

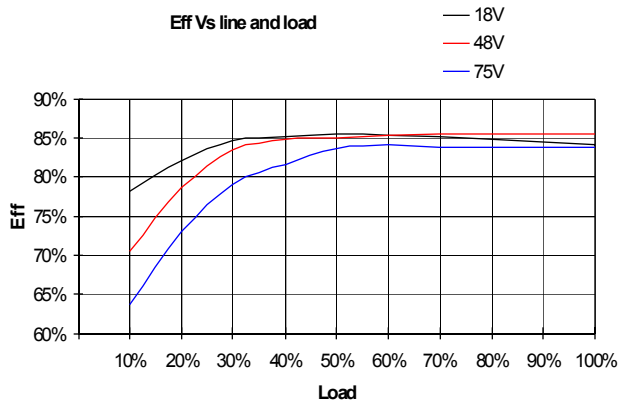


Figure 2

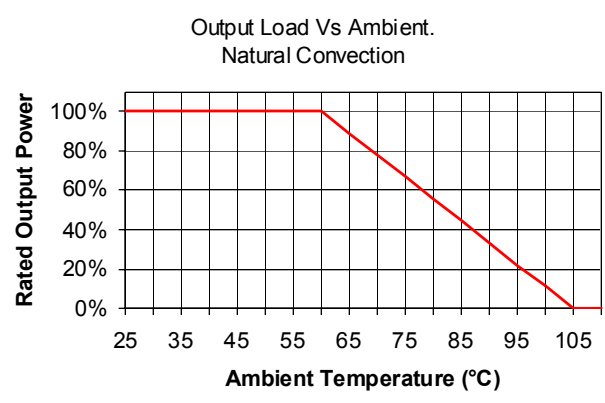
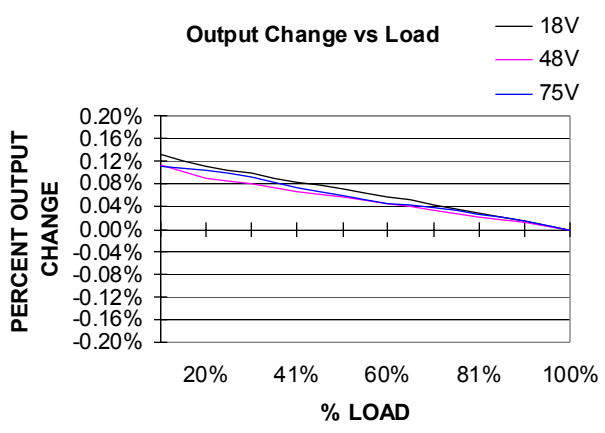


Figure 3



MTBF

Figure 4

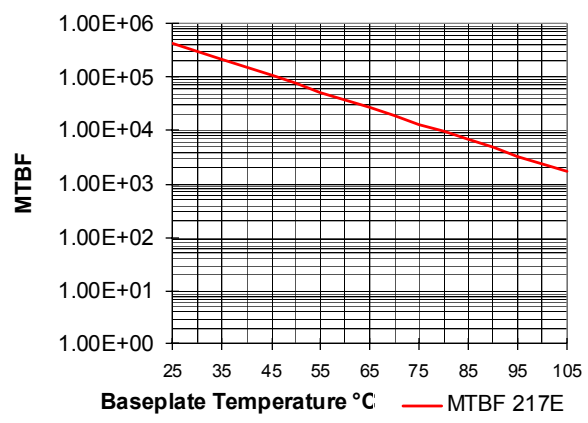


Figure 5

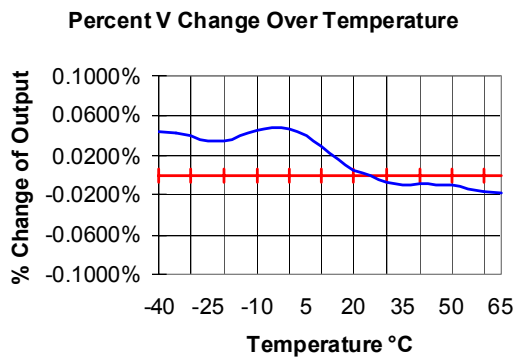
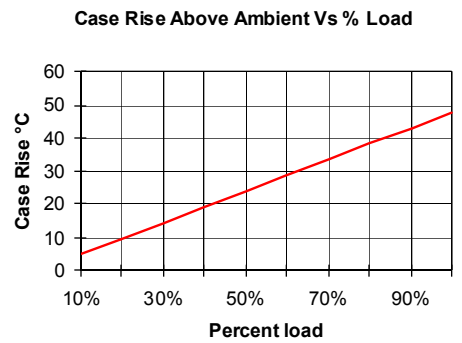


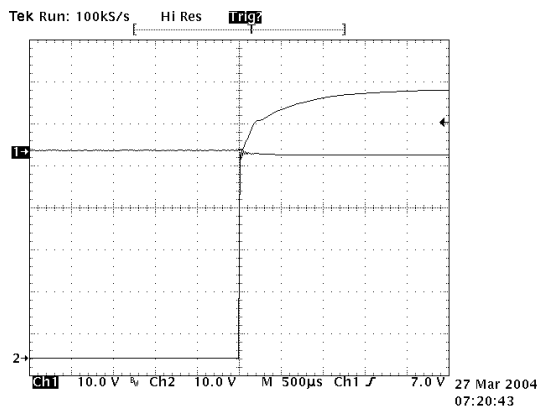
Figure 6



Turn on Characteristics (Typ)

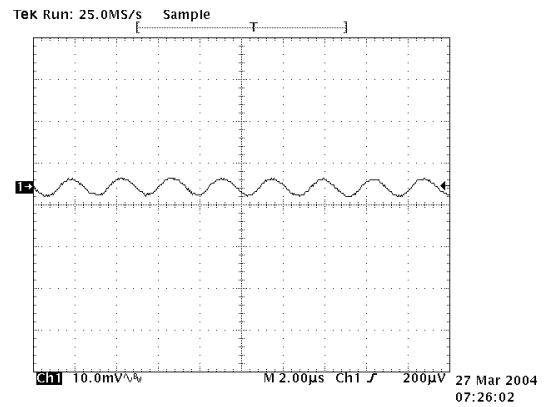
$V_{in} = 48.0 \text{ Vdc}$, $I_{load} = 1.67\text{A}$

Figure 7



Input Reflected Ripple 10mA/mV

Figure 8



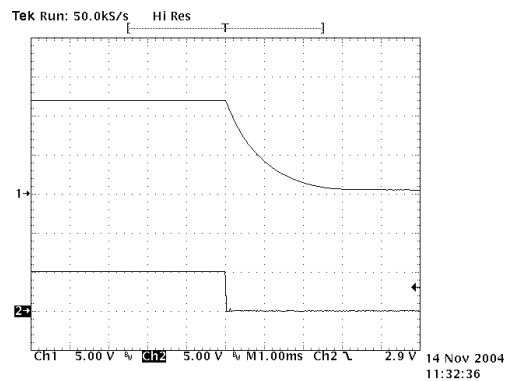
Enable going high

Figure 9



Enable going low

Figure 10

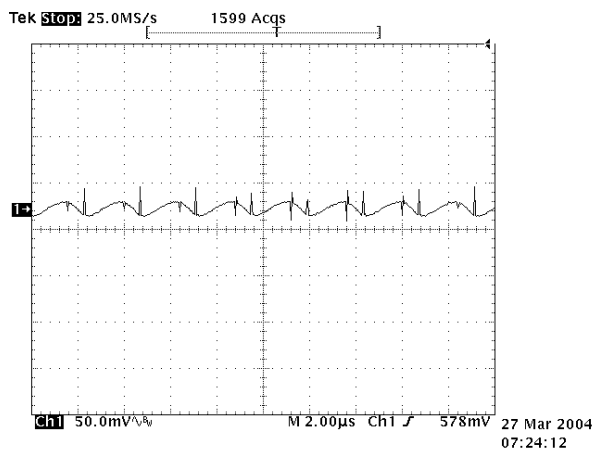


Output Characteristics (Typ)

Figure 11

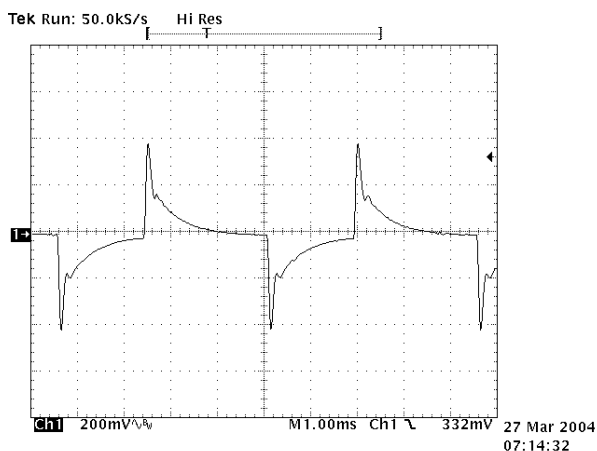
Output Ripple

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Dynamic Load Response
50%-100% load swing

Figure 12



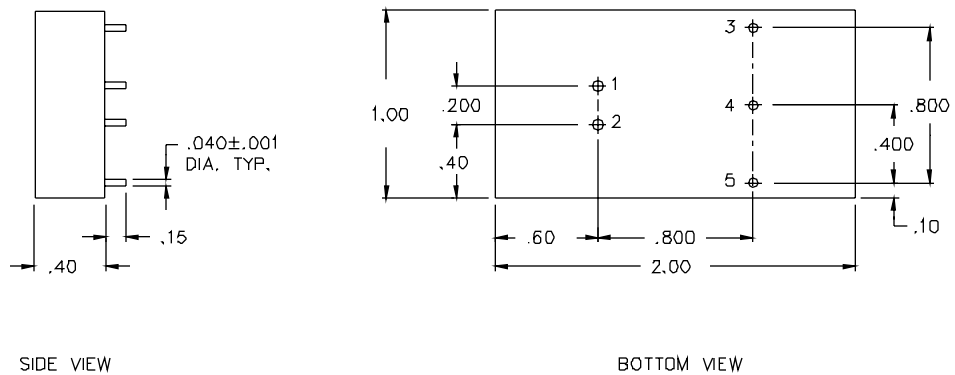
PIN CONNECTIONS

- 1. + Input
- 2. - Input
- 3. + Output
- 4. No Pin
- 5. Output Common

Figure 13

PIN Diameters

Pins 1-5 0.040 ±0.002



SIDE VIEW

BOTTOM VIEW

Figure 11

