

DC-DC Converter Short Form

MPDTH**050WAS/WAH (6A output POL-Alliance product)

■ Features

- Point-of-Load Alliance product
- Up to 6A output current
- Wide-Output Voltage Adjust (0.8-5.5V)
- High efficiency up to 95% TYP (@5Vin 3.3V/4Aout)
- Wide Operating Temp - 40 °C to + 85 °C
- Open frame TH or SMT termination
- Auto-Track TM Sequencing
- Pre-Biased start-up
- Output Over-Current Protection
- Output Voltage Sense
- ON/OFF Inhibit
- Under-Voltage Lockout

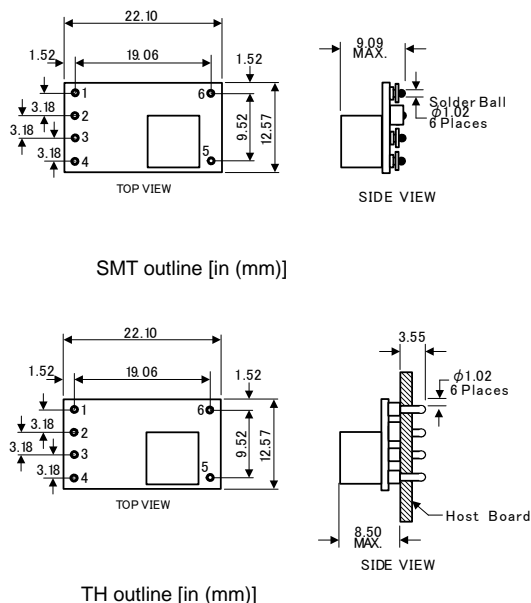


■ Ordering Information

Input Voltage	Output Voltage	Output Current	Model Number
2.95V to 3.65V	0.8V to 2.5V	6A	MPDTH03050WA(S)/(H)
4.5V to 5.5V	0.8V to 3.6V	6A	MPDTH05050WA(S)/(H)
10.8V to 13.2V	1.2V to 5.5V	6A	MPDTH12050WA(S)/(H)

OPTIONS: "WAS" -- SMT termination, "WAH" -- TH termination

■ Dimensions



Pin No.	Signal
1.	GND
2.	Track
3.	Vin
4.	Inhibit
5.	Vo Adjust
6.	Vout

⚠ Note:

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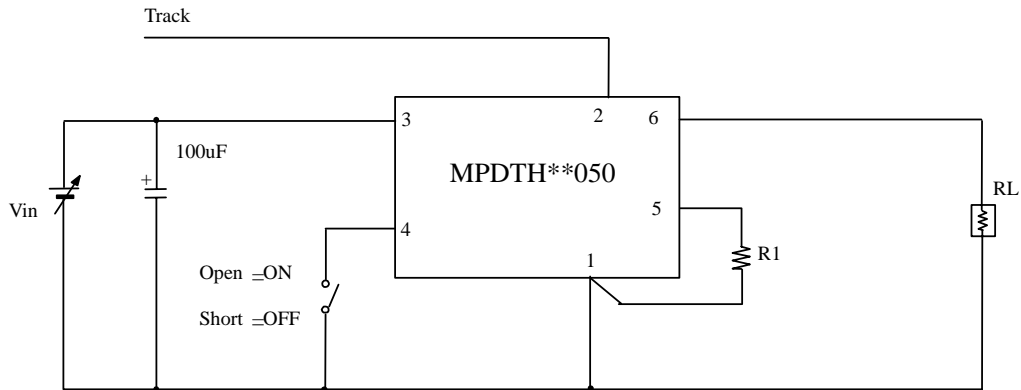


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2006.10.3

■ Standard Application



■ Output Voltage Adjustment

$$R1 = 10k \cdot \frac{0.8V}{V_{out} - 0.8V} - 2.49k \quad : \text{MPDTH 03050 / 05050}$$

$$R1 = 10k \cdot \frac{0.8V}{V_{out} - 1.2V} - 1.82k \quad : \text{MPDTH 12050}$$

■ General Specifications

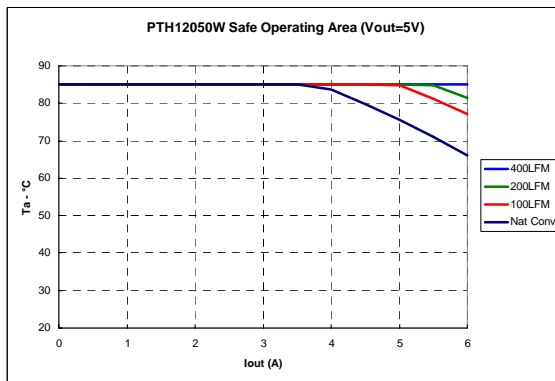
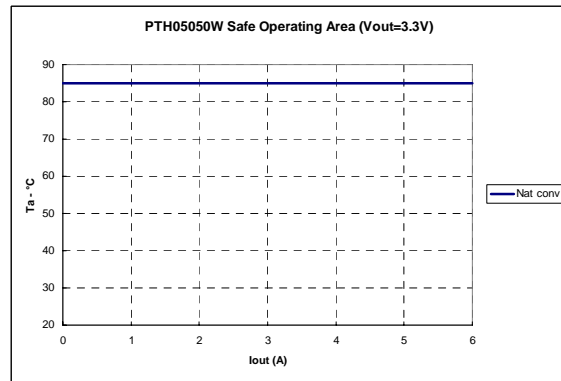
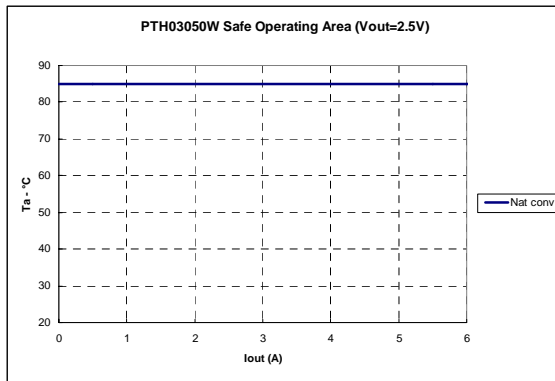
(Ta=25°C)

Item	Symbol	Condition	Parts Number	Min.	Typ.	Max.	Unit
Input voltage	Vin		MPDTH03050	2.95	3.3	3.65	V
			MPDTH05050	4.5	5.0	5.5	
			MPDTH12050	10.8	12.0	13.2	
Output voltage	Vout	Vin=2.95V to 3.65V	MPDTH03050	0.8		2.5	V
		Vin=4.5V to 5.5V	MPDTH05050	0.8		3.6	
		Vin=10.8V to 13.2V	MPDTH12050	1.2		5.5	
Total output variation	Regtot	Rset 1% tolerance, ±100ppm/°C				±3	% Vo
Output current	Iout			0		6	A
Ripple voltage	Vrip	Vin=3.3V, Vout=2.5V, Iout=6A			20		mVp-p
		Vin=5.0V, Vout=3.3V, Iout=6A			20		
		Vin=12.0V, Vout=3.3V, Iout=12A			33		
Efficiency	Eff	Vin=3.3V, Vout=2.5V, Iout=4A			94		%
		Vin=5.0V, Vout=3.3V, Iout=4A			95		
		Vin=12.0V, Vout=5.0V, Iout=5A			93		

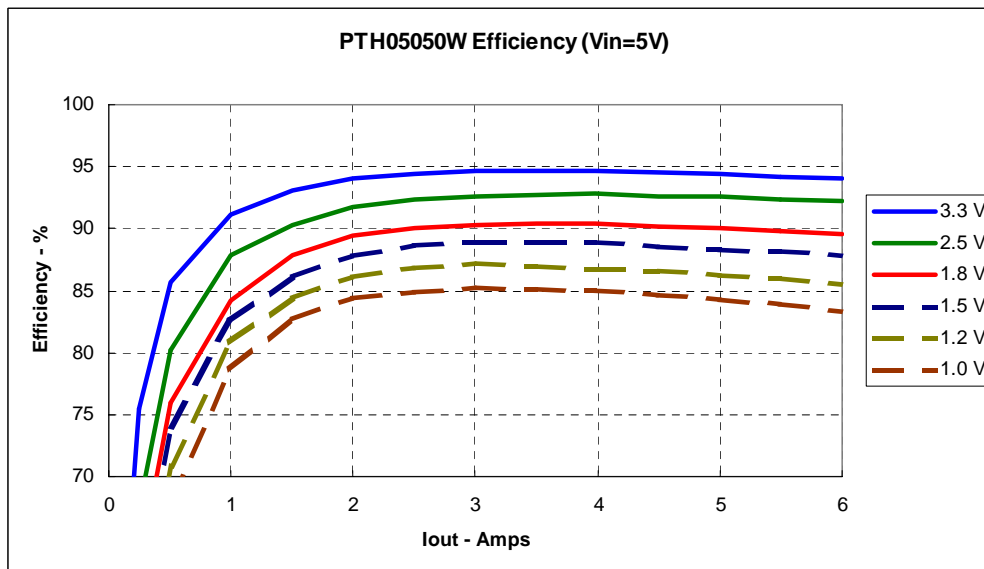
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■ Thermal Derating



■ Conversion Efficiency



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