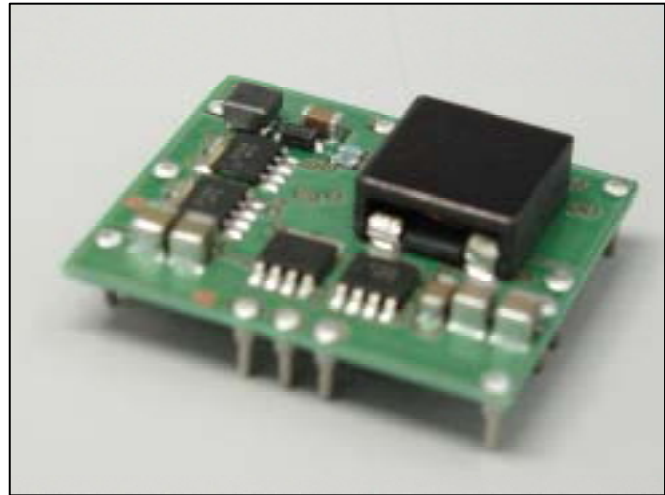


# DC-DC Converter Short Form

## MPDTH\*\*030WAS/WAH (30A output POL-Alliance product)

### ■ Features

- Point-of-Load Alliance product
- Up to 30A output current
- Wide-Output Voltage Adjust (0.8-5.5V)
- High efficiency up to 94% TYP (@5Vin 3.3V/20Aout)
- Wide Operating Temp - 40 °C to + 85 °C
- Open frame TH or SMT termination
- Auto-Track TM Sequencing
- Margin Up/Down Controls
- Pre-Biased start-up
- Output Over-Current Protection
- Output Voltage Sense
- ON/OFF Inhibit
- Under-Voltage Lockout

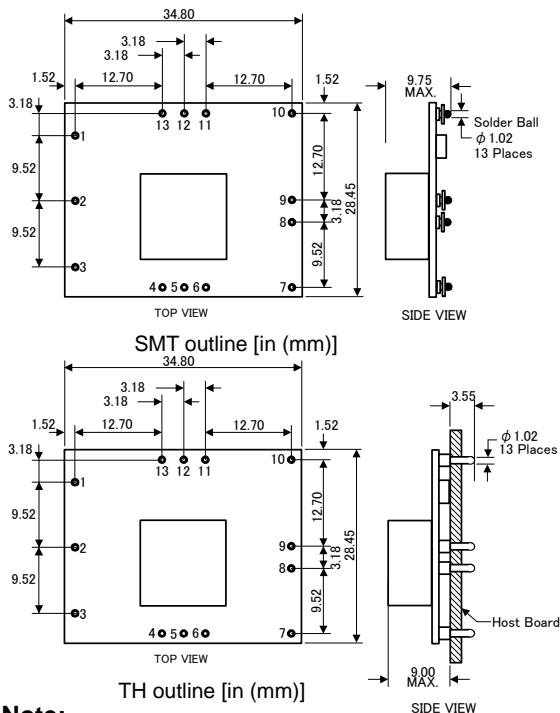


### ■ Ordering Information

Input Voltage	Output Voltage	Output Current	Model Number
3.0V to 3.6V	0.8V to 2.5V	30A	MPDTH03030WA(S)/(H)
4.5V to 5.5V	0.8V to 3.6V	30A	MPDTH05030WA(S)/(H)
10.8V to 13.2V	1.2V to 5.5V	26A	MPDTH12030WA(S)/(H)

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

### ■ Dimensions

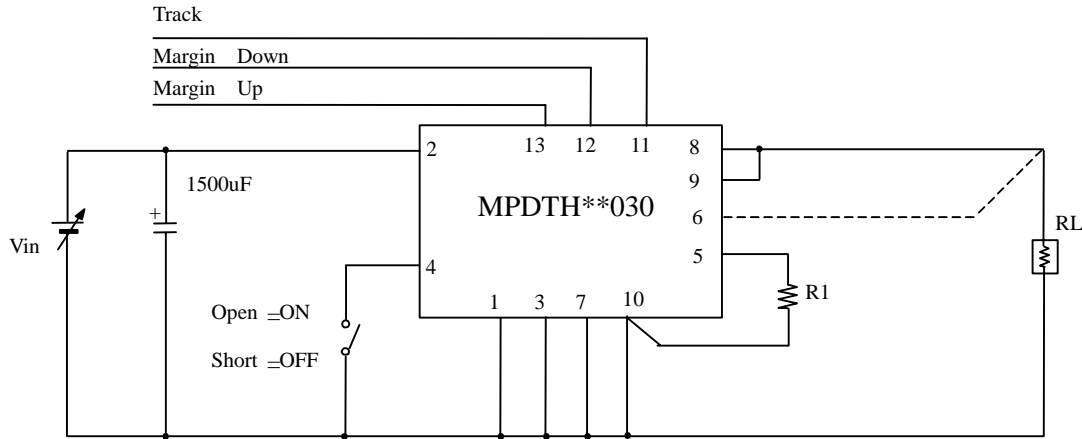


Pin No.	Signal	Pin No.	Signal
1.	GND	8.	Vout
2.	Vin	9.	Vout
3.	Inhibit	10.	GND
4.	Inhibit	11.	Track
5.	VoAdjust	12.	Margin Down
6.	VoSense	13.	Margin Up
7.	GND		

### ⚠ Note:

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2. This datasheet has only typical specifications because there is no space for detailed specifications. Therefore, please approve our product specifications or transact the approval sheet for product specifications before ordering.

## ■ Standard Application



## ■ Output Voltage Adjustment

$$R1 = 10k \cdot \frac{0.8V}{V_{out} - 0.8V} - 2.49k \quad : \text{MPDTH03030 / 05030}$$

$$R1 = 10k \cdot \frac{0.8V}{V_{out} - 1.2V} - 1.82k \quad : \text{MPDTH12030}$$

## ■ General Specifications

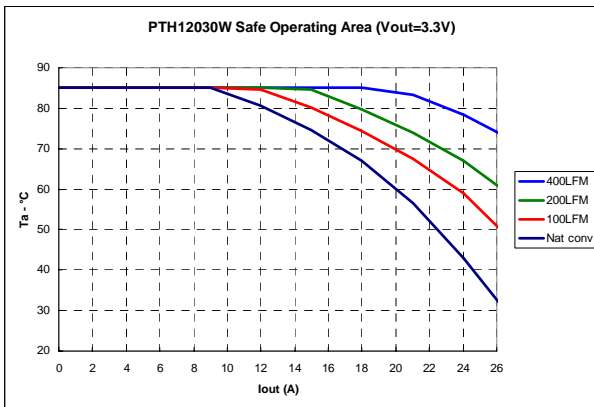
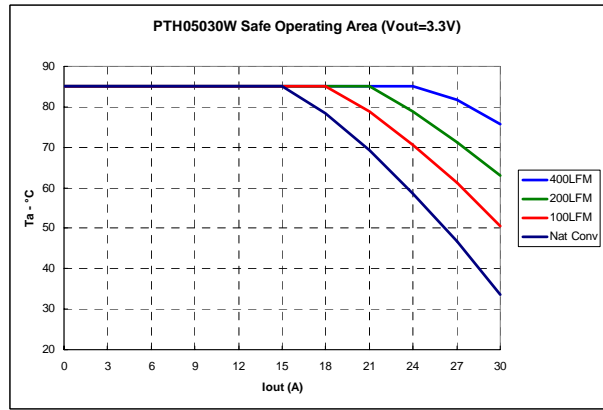
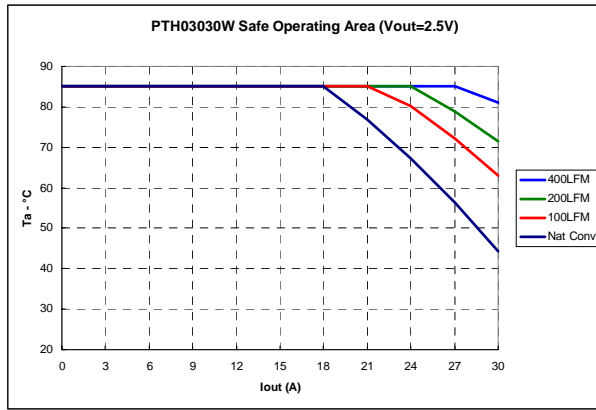
(Ta=25°C)

Item	Symbol	Condition	Parts Number	Min.	Typ.	Max.	Unit
Input voltage	Vin		MPDTH03030	2.95	3.3	3.65	V
			MPDTH05030	4.5	5.0	5.5	
			MPDTH12030	10.8	12.0	13.2	
Output voltage	Vout	Vin=2.95V to 3.65V	MPDTH03030	0.8		2.5	V
		Vin=4.5V to 5.5V	MPDTH05030	0.8		3.6	
		Vin=10.8V to 13.2V	MPDTH12030	1.2		5.5	
Total output variation	Regtot	Rset 1% tolerance, ±100ppm/°C				±3	%Vo
Output current	Iout		MPDTH03030, MPDTH05030	0		30	A
			MPDTH12030	0		26	
Ripple voltage	Vrip		Vin=3.3V, Vout=2V, Iout=30A		30		mVp-p
			Vin=5.0V, Vout=3.3V, Iout=30A		40		
			Vin=12.0V, Vout=3.3V, Iout=26A		25		
Efficiency	Eff		Vin=3.3V, Vout=2.5V, Iout=20A		93		%
			Vin=5.0V, Vout=3.3V, Iout=20A		94		
			Vin=12.0V, Vout=5.0V, Iout=18A		94.5		

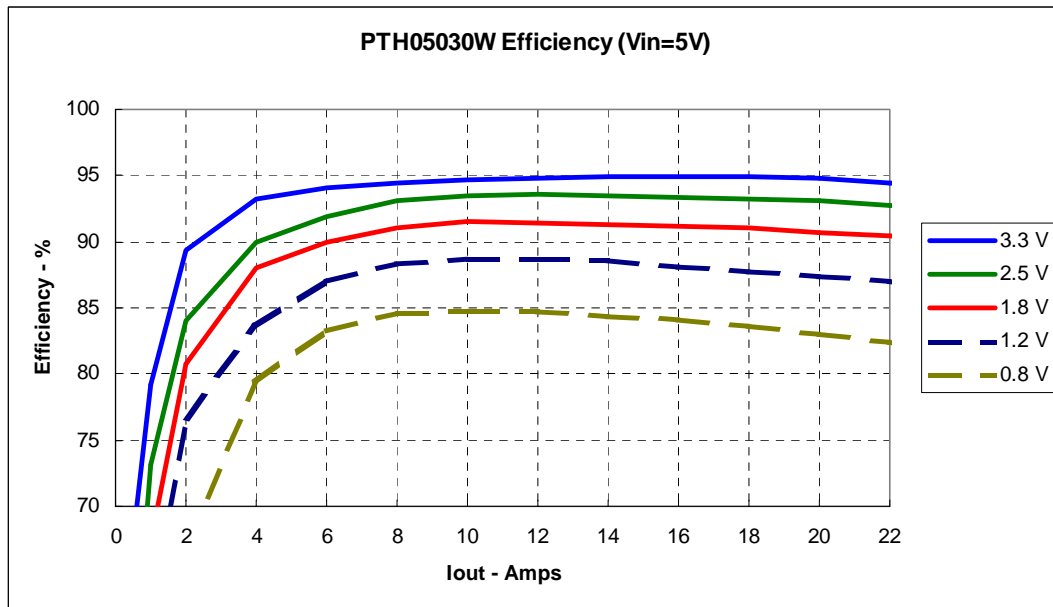
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### Thermal Derating



### Conversion Efficiency



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