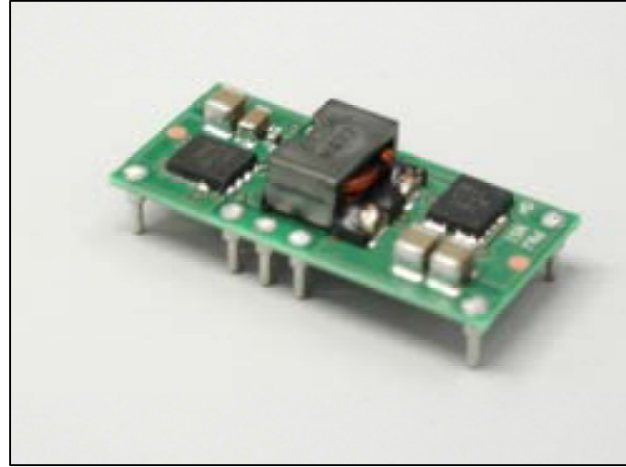


DC-DC Converter Short Form

MPDTH**010WAS/WAH (15A output POL-Alliance product)

■ Features

- Point-of-Load Alliance product
- Up to 15A output current
- Wide-Output Voltage Adjust (0.8-5.5V)
- High efficiency up to 95% TYP (@5Vin 3.3V/10Aout)
- Wide Operating Temp - 40 °C to + 85 °C
- Open frame TH or SMT termination
- Auto-Track™ Sequencing
- Margin Up/Down Controls
- Pre-Biased start-up
- Output Over-Current Protection
- Output Voltage Sense
- ON/OFF Inhibit
- Under-Voltage Lockout

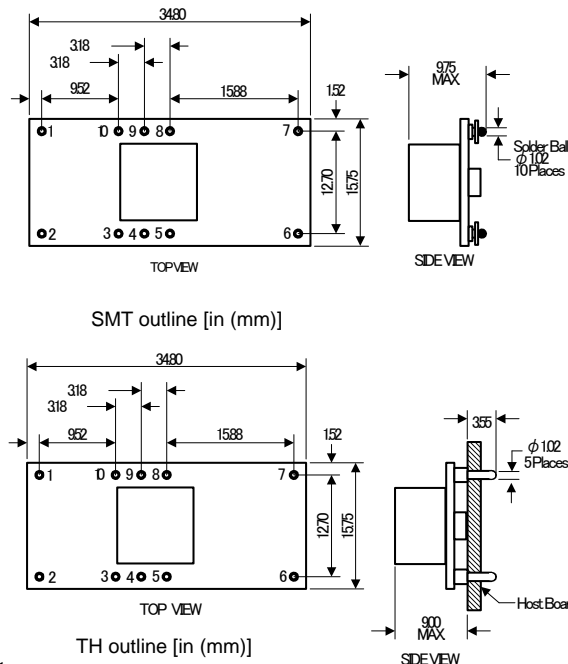


■ Ordering Information

Input Voltage	Output Voltage	Output Current	Model Number
3.0V to 3.6V	0.8V to 2.5V	15A	MPDTH03010WA(S)/(H)
4.5V to 5.5V	0.8V to 3.6V	15A	MPDTH05010WA(S)/(H)
10.8V to 13.2V	1.2V to 5.5V	12A	MPDTH12010WA(S)/(H)

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

■ Dimensions

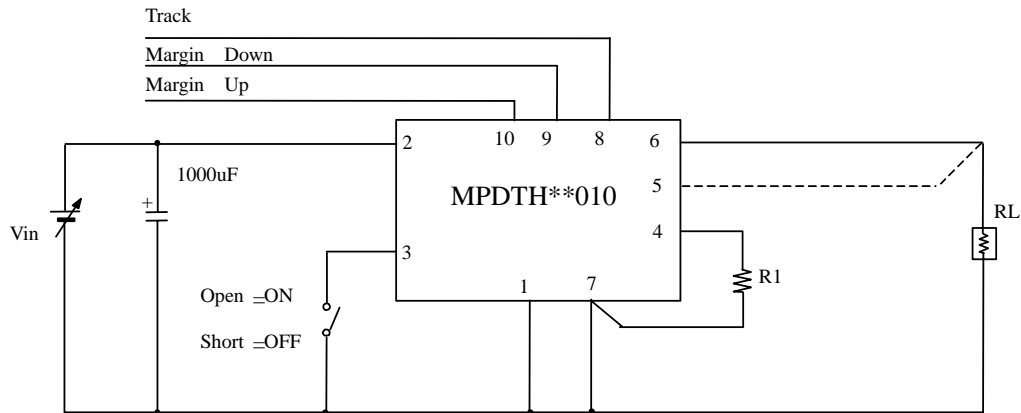


Pin No.	Signal	Pin No.	Signal
1.	GND	6.	Vout
2.	Vin	7.	GND
3.	Inhibit	8.	Track
4.	VoAdjust	9.	Margin Down
5.	VoSense	10.	Margin Up

⚠ Note:

1. This datasheet is downloaded from the website of Murata Manufacturing co., ltd. Therefore, it's specifications are subject to change or our products in it may be discontinued without advance notice. Please check with our sales representatives or product engineers before ordering.
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

$$R1 = 10k \cdot \frac{0.8V}{V_{out} - 0.8V} - 2.49k \quad : \text{MPDTH 03010 / 05010}$$

$$R1 = 10k \cdot \frac{0.8V}{V_{out} - 1.2V} - 1.82k \quad : \text{MPDTH 12010}$$

General Specifications

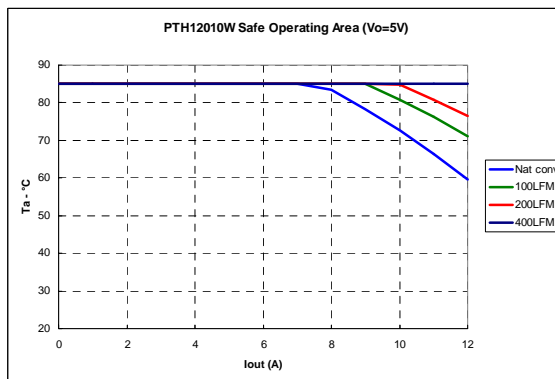
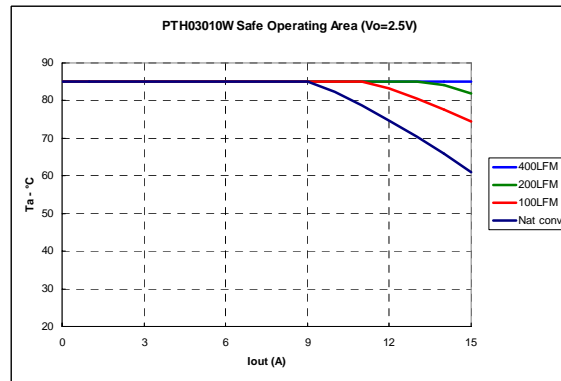
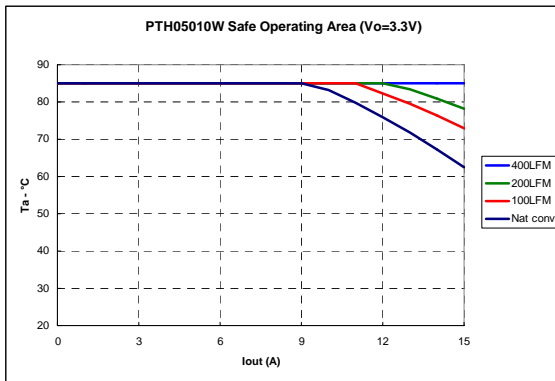
(Ta=25°C)

Item	Symbol	Condition	Parts Number	Min.	Typ.	Max.	Unit
Input voltage	Vin		MPDTH03010	2.95	3.3	3.65	V
			MPDTH05010	4.5	5.0	5.5	
			MPDTH12010	10.8	12.0	13.2	
Output voltage	Vout	Vin=2.95V to 3.65V	MPDTH03010	0.8		2.5	V
		Vin=4.5V to 5.5V	MPDTH05010	0.8		3.6	
		Vin=10.8V to 13.2V	MPDTH12010	1.2		5.5	
Total output variation	Regtot	Rset 1% tolerance, ±100ppm/°C				±3	% Vo
Output current	Iout	MPDTH03010, MPDTH05010		0		15	A
		MPDTH12010		0		12	
Ripple voltage	Vrip	Vin=3.3V, Vout=2V, Iout=15A			20		mVp-p
		Vin=5.0V, Vout=3.3V, Iout=15A			30		
		Vin=12.0V, Vout=3.3V, Iout=12A			33		
Efficiency	Eff	Vin=3.3V, Vout=2.5V, Iout=10A			93		%
		Vin=5.0V, Vout=3.3V, Iout=10A			95		
		Vin=12.0V, Vout=5.0V, Iout=10A			94		

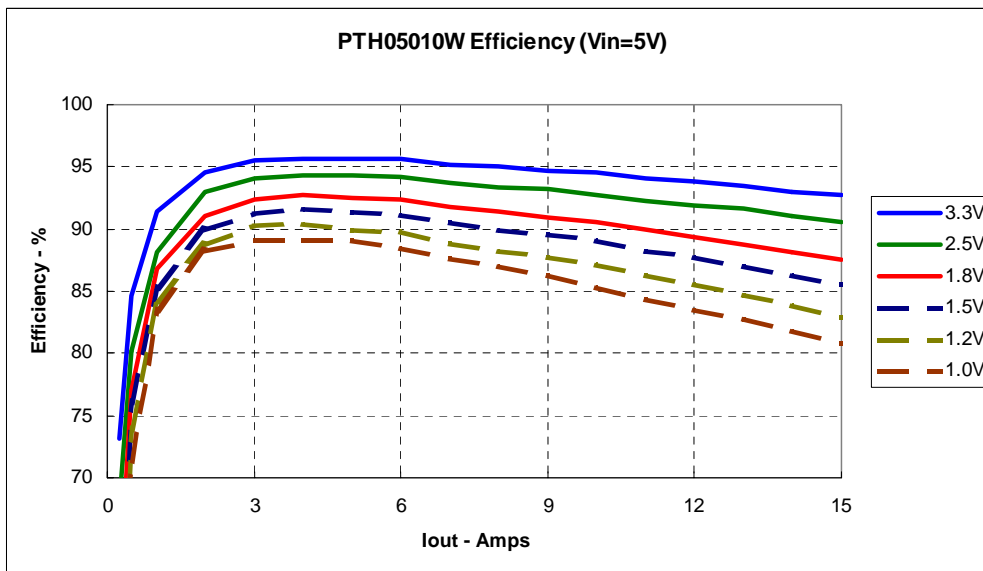
△ Note:

1. This datasheet is downloaded from the website of Murata Manufacturing co., ltd. Therefore, it's specifications are subject to change or our products in it may be discontinued without advance notice. Please check with our sales representatives or product engineers before ordering.
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.

Thermal Derating



Conversion Efficiency



⚠ Note:

1. This datasheet is downloaded from the website of Murata Manufacturing co., ltd. Therefore, it's specifications are subject to change or our products in it may be discontinued without advance notice. Please check with our sales representatives or product engineers before ordering.
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.