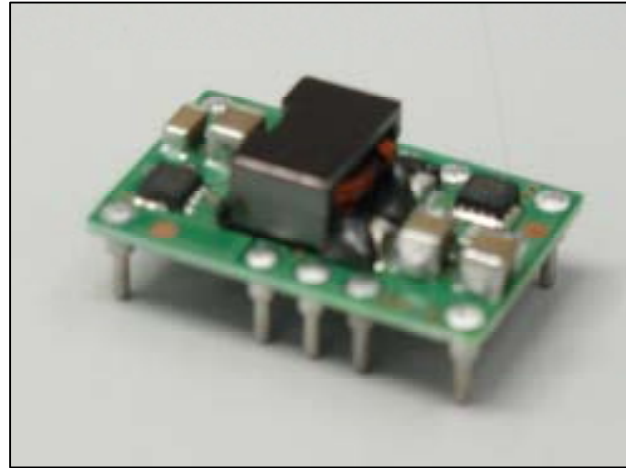


DC-DC Converter Short Form

MPDTH**060WAS/WAH (10A output POL-Alliance product)

■ Features

- Point-of-Load Alliance product
- Up to 10A output current
- Wide-Output Voltage Adjust (0.8-5.5V)
- High efficiency up to 94% TYP (@5Vin 3.3V/7Aout)
- 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

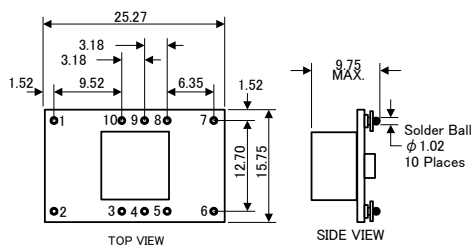


■ Ordering Information

Input Voltage	Output Voltage	Output Current	Model Number
3.0V to 3.6V	0.8V to 2.5V	10A	MPDTH03060WA(S)/(H)
4.5V to 5.5V	0.8V to 3.6V	10A	MPDTH05060WA(S)/(H)
10.8V to 13.2V	1.2V to 5.5V	10A	MPDTH12060WA(S)/(H)

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

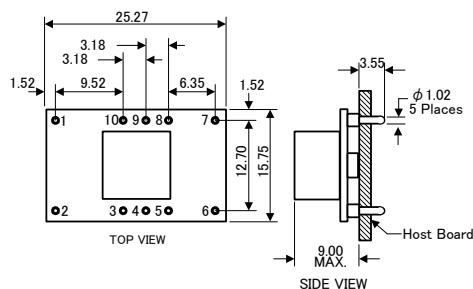
■ Dimensions



TOP VIEW

SIDE VIEW

SMT outline [in (mm)]



TOP VIEW

SIDE VIEW

TH outline [in (mm)]

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:

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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.

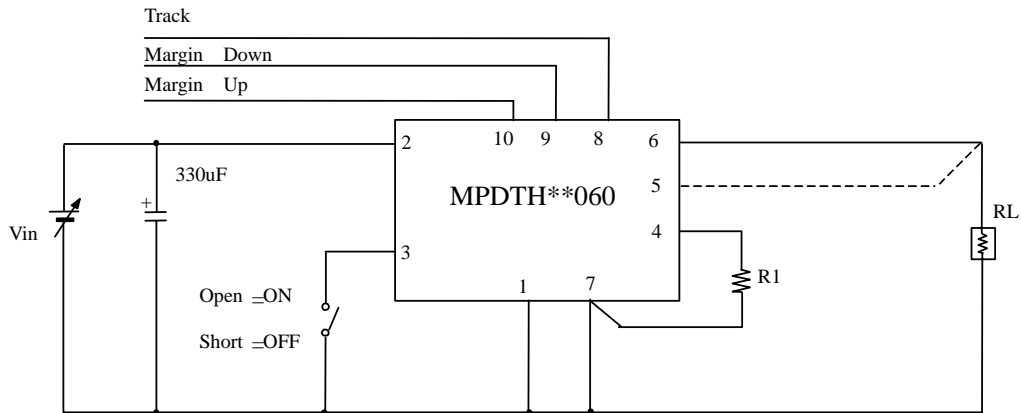


Murata Manufacturing Co., Ltd.

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2006.9.29

Standard Application



Output Voltage Adjustment

$$R1 = 10k \cdot \frac{0.8V}{V_{out} - 0.8V} - 2.49k \quad : \text{MPDTH 03060 / 05060}$$

$$R1 = 10k \cdot \frac{0.8V}{V_{out} - 1.2V} - 1.82k \quad : \text{MPDTH 12060}$$

General Specifications

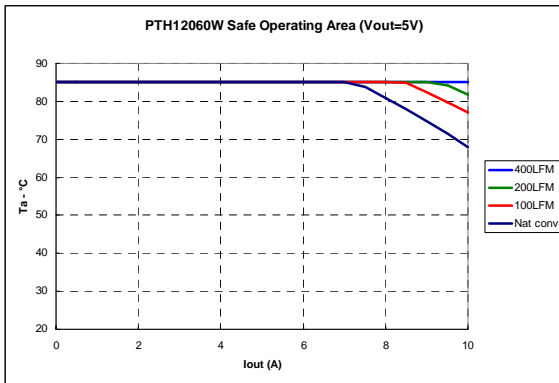
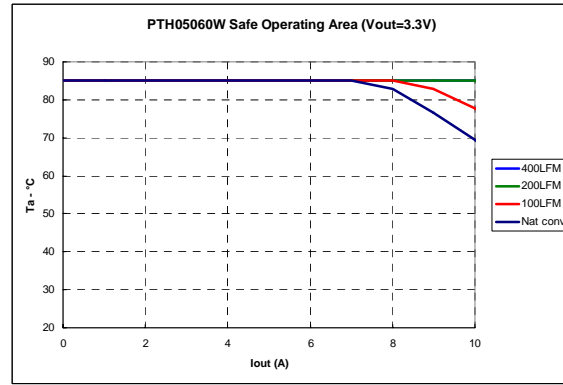
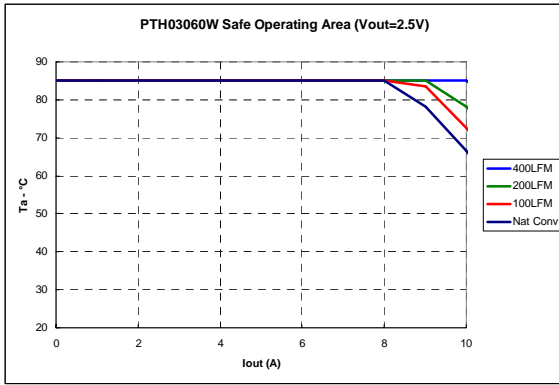
(Ta=25°C)

Item	Symbol	Condition	Parts Number	Min.	Typ.	Max.	Unit
Input voltage	Vin		MPDTH03060	2.95	3.3	3.65	V
			MPDTH05060	4.5	5.0	5.5	
			MPDTH12060	10.8	12.0	13.2	
Output voltage	Vout	Vin=2.95V to 3.65V	MPDTH03060	0.8		2.5	V
		Vin=4.5V to 5.5V	MPDTH05060	0.8		3.6	
		Vin=10.8V to 13.2V	MPDTH12060	1.2		5.5	
Total output variation	Regtot	Rset 1% tolerance, ±100ppm/°C				±3	% Vo
Output current	Iout			0		10	A
Ripple voltage	Vrip	Vin=3.3V, Vout=2V, Iout=10A			25		mVp-p
		Vin=5.0V, Vout=3.3V, Iout=10A			25		
		Vin=12.0V, Vout=3.3V, Iout=10A			33		
Efficiency	Eff	Vin=3.3V, Vout=2.5V, Iout=7A			93		%
		Vin=5.0V, Vout=3.3V, Iout=7A			94		
		Vin=12.0V, Vout=5.0V, Iout=8A			94		

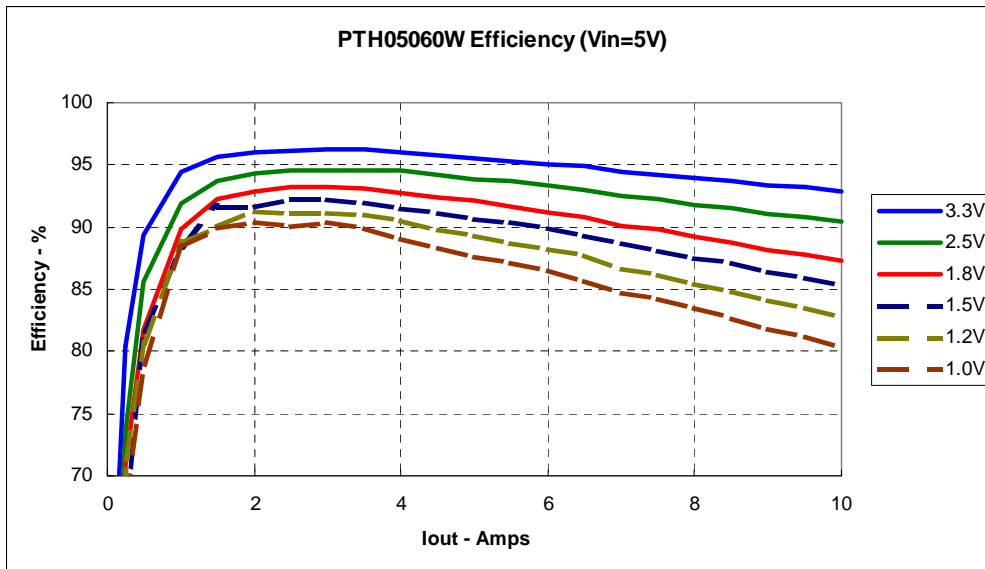
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Thermal Derating



Conversion Efficiency



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