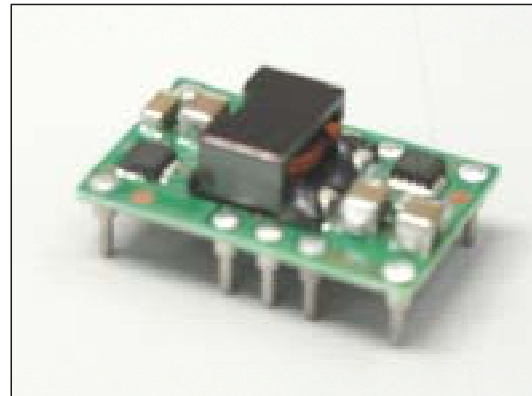


# DC-DC Converter Short Form

## MPDTH\*\*060YAS/YAH (10A output Point-of-Load Alliance)

### ■ Features

- VTT Bus Termination Output (Output Tracks the System Vref)
- High efficiency
  - 86% typical @3.3V input 1.25V/8A output
  - 86% typical @5.0V input 1.25V/8A output
  - 83% typical @12.0V input 1.25V/8A output
- Wide Operating Ambient Temperature
  - 40 °C to + 85 °C
- DDR, QDR Version
- ON/OFF Inhibit
- Under-Voltage Lockout
- Output Over-Current Protection

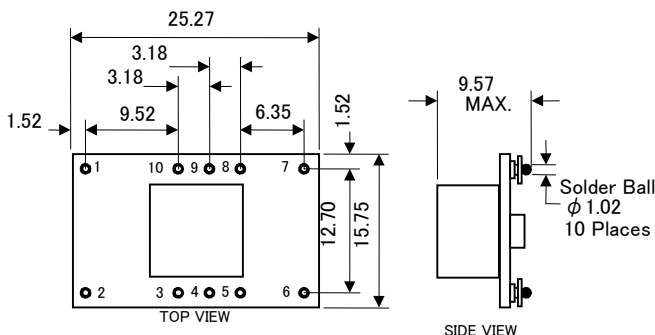


### ■ Ordering Information

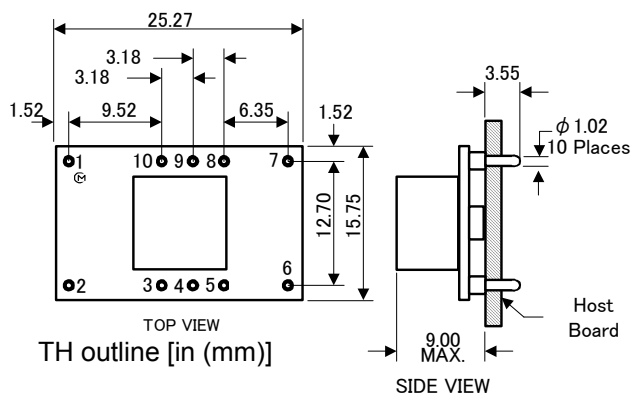
Input Voltage	Output Voltage	Output Current	Model Number
2.95V to 3.65V	0.55V to 1.8V	10A	MPDTH03060YA(S)/(H)
4.5V to 5.5V	0.55V to 1.8V	10A	MPDTH05060YA(S)/(H)
10.8V to 13.2V	0.55V to 1.8V	10A	MPDTH12060YA(S)/(H)

OPTIONS: "YAS" -- SMT termination, "YAH" – TH termination

### ■ DIMENSIONS AND PIN ASSIGN



SMT outline [in (mm)]



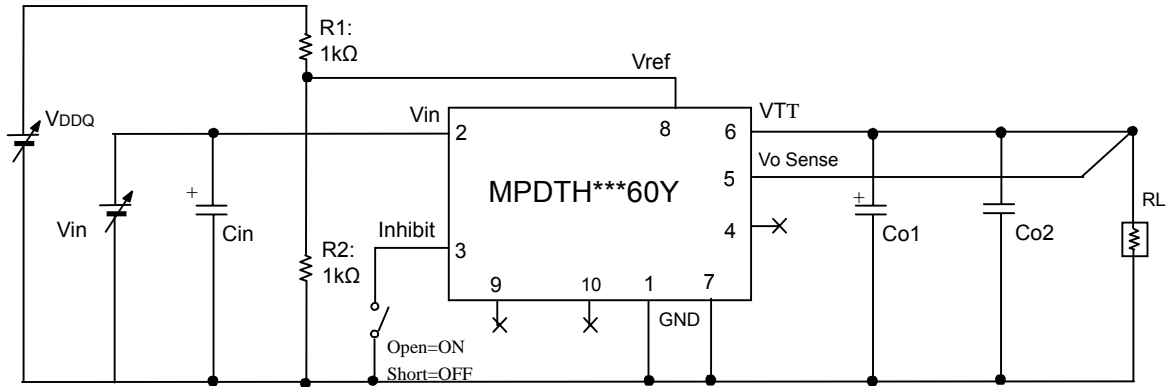
TH outline [in (mm)]

Pin No.	Signal	Pin No.	Signal
1.	GND	6.	VTT
2.	Vin	7.	GND
3.	Inhibit	8.	Vref
4.	No Connect	9.	No Connect
5.	VoSense	10.	No Connect

#### ⚠ 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



Cin : 330 $\mu$ F(3.3V,5V Vin),560 $\mu$ F(12V Vin) Low-ESR Electrolytic Capacitor  
 Co1 : 470 $\mu$ F(3.3V,5V Vin),940 $\mu$ F(12V Vin) Low-ESR Electrolytic Capacitor  
 Co2 : 200 $\mu$ F(3.3V,5V Vin),400 $\mu$ F(12V Vin) Ceramic Capacitor

## ■ General Specifications

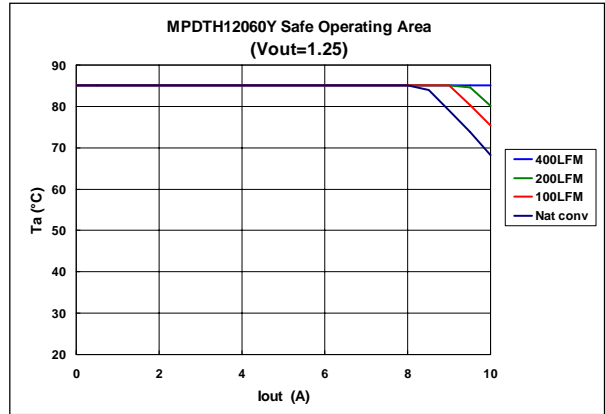
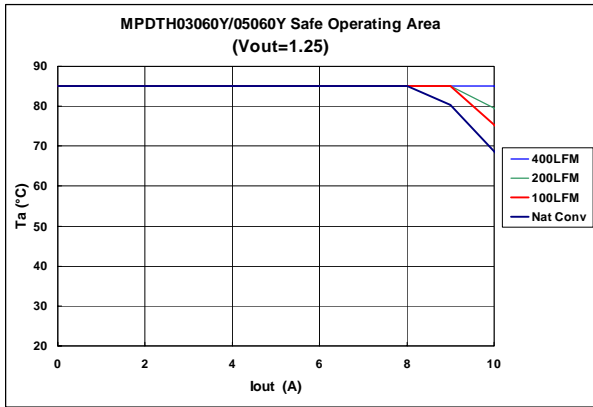
(Ta=25°C)

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	Vref=0.55~1.8V		0.55		1.8	V
Output current	Iout					$\pm 10$	A
Ripple voltage	Vrip	Vin=3.3V, Vout=1.25V, Iout=10A			20		mVp-p
		Vin=5.0V, Vout=1.25V, Iout=10A			20		
		Vin=12.0V, Vout=3.3V, Iout=10A			20		
Efficiency	Eff	Vin=3.3V, Vout=1.25V, Iout=8A			86		%
		Vin=5.0V, Vout=1.25V, Iout=8A			86		
		Vin=12.0V, Vout=1.25V, Iout=8A			83		

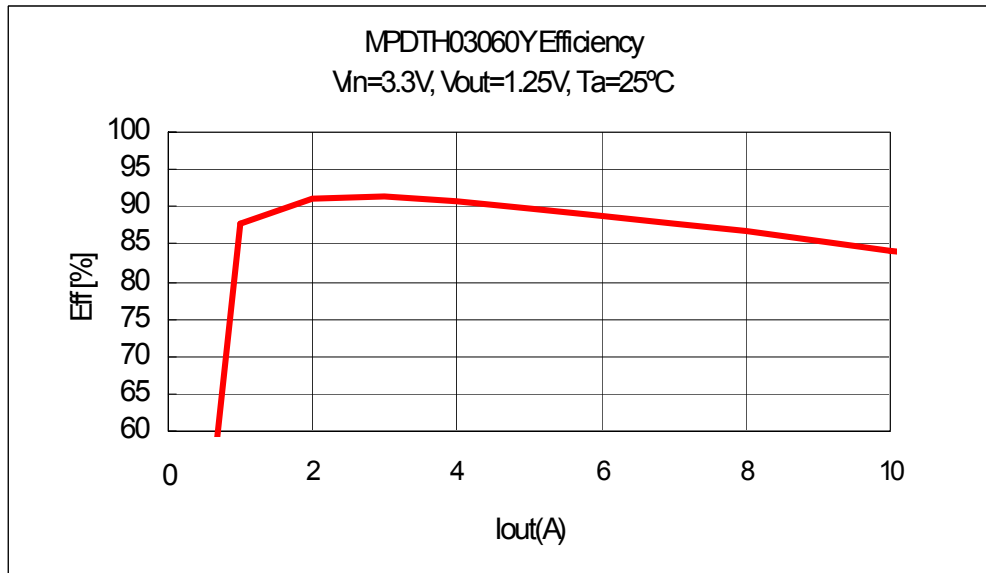
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■ Thermal Derating



■ Conversion Efficiency



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