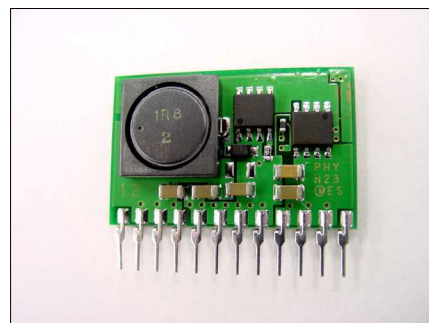


MPDTY01/02 Series (6A-POL DC-DC Converter [Non-isolated])

■ Features

- Smallest and Thinnest SIL in the Industry
- High Efficiency (93% Typical)
- Wide Operating Temperature Range
(-40 to +85 degreeC)
- Surface Mount
- On/Off Control Function
- Wide Input Voltage Range:
3.0 to 3.63V (MPDTY01_S)
4.5 to 5.5V (MPDTY02_S)
- Trim Function
Vout Range: 0.873 to 2.83V (MPDTY01_S)
Vout Range: 0.873 to 3.74V (MPDTY02_S)
- Short Circuit Protection and Under Voltage Lockout Protection



■ General Specifications

(Ta=25 degreeC)

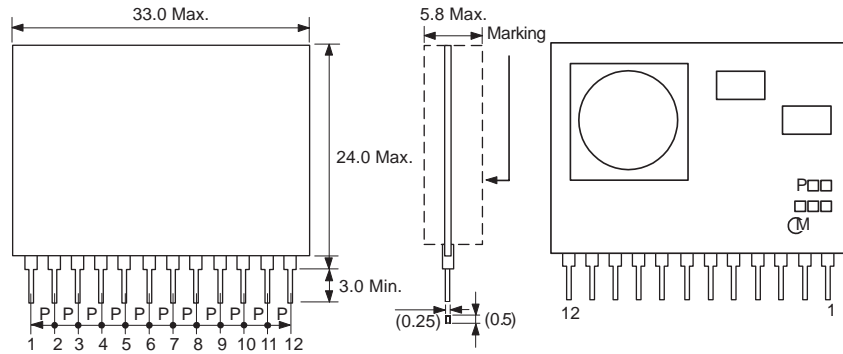
Item	Symbol	Condition	Parts Number	Min.	Typ.	Max.	Unit
Input Voltage	Vin		MPDTY02_S	4.5	5.0	5.5	V
			MPDTY01_S	3.0	3.3	3.63	
Output Voltage	Vout	Vin=+4.5 to +5.5V Iout=0 to 6A	MPDTY027S	3.2	3.3	3.4	V
			MPDTY026S	2.425	2.5	2.575	
			MPDTY025S	1.940	2.0	2.060	
			MPDTY024S	1.746	1.8	1.854	
			MPDTY023S	1.455	1.5	1.545	
			MPDTY022S	1.164	1.2	1.236	
			MPDTY021S	0.970	1.0	1.030	
		Vin=+3.0 to +3.6V Iout=0 to 6A	MPDTY016S	2.425	2.5	2.575	V
			MPDTY015S	1.940	2.0	2.060	
			MPDTY014S	1.746	1.8	1.854	
			MPDTY013S	1.455	1.5	1.545	
			MPDTY012S	1.164	1.2	1.236	
			MPDTY011S	0.970	1.0	1.030	
Adjustable Range	Vout (adj)	Vout<Vin-1.0V (MPDTY02_S) Vout<Vin-0.5V (MPDTY01_S)		-10		+10	%
Output Current	Iout			0		6	A
Ripple Voltage	Vrip	Vin=+5V, Iout=6A				100	mVp-p
		Vin=+3.3V, Iout=6A				80	
Efficiency	Eff	Vin=5.0V, Vout=3.3V, Iout=4A			93		%
		Vin=3.3V, Vout=2.5V, Iout=4A			93		%

▲Note • Please read rating and ▲CAUTION (for storage, operating, rating, soldering, mounting and handling) in this catalog to prevent smoking and/or burning, etc.

• This catalog 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.

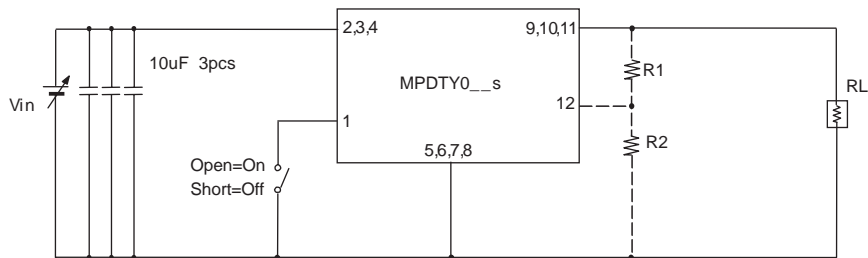
MPDTY01/02 Series (6A-POL DC-DC Converter [Non-isolated])

■ Dimensions

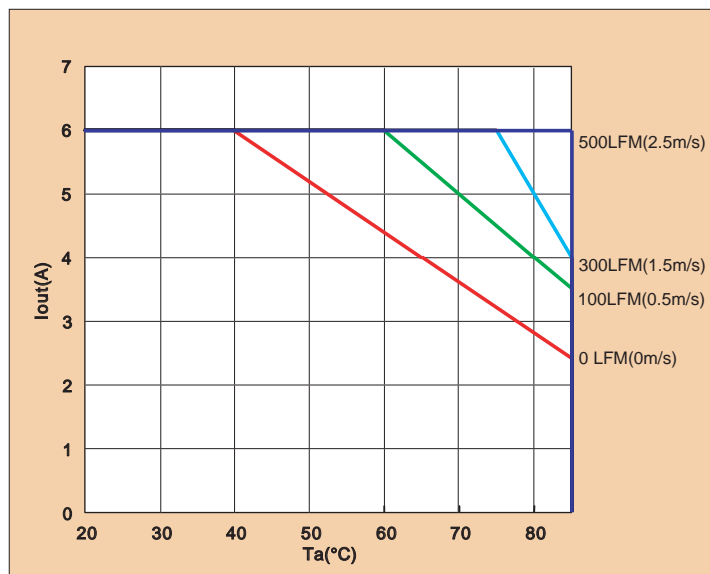


Pin No.	Signal
1	On/Off
2,3,4	Vin
5,6,7,8	DND
9,10,11	Vout
12	Adust

■ TEST CIRCUIT



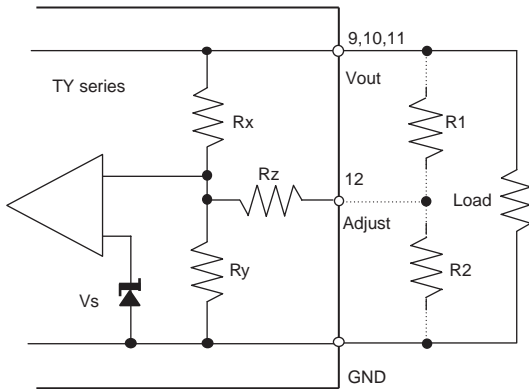
■ Typical Power Derating



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MPDTY01/02 Series (6A-POL DC-DC Converter [Non-isolated])

OUTPUT VOLTAGE ADJUSTMENT



To decrease output voltage

$$R1 = \frac{R_x \cdot R_y (V_{out} - V_s)}{R_x \cdot V_s - R_y (V_{out} - V_s)} - R_z$$

$$R2 = \text{Open}$$

To increase output voltage

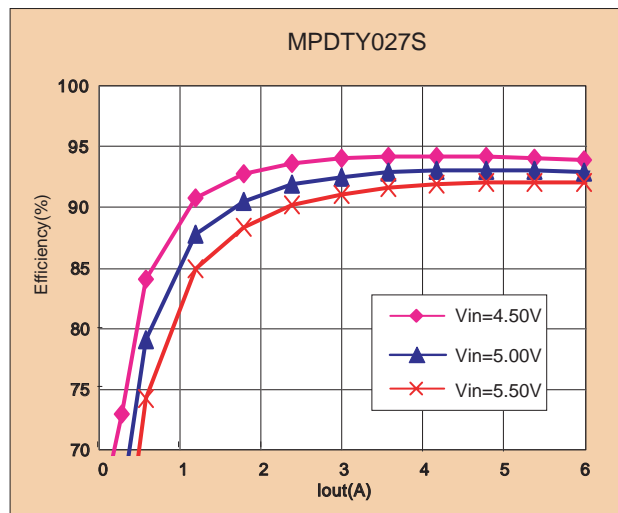
$$R1 = \text{Open}$$

$$R2 = \frac{R_x \cdot R_y \cdot V_s}{R_y (V_{out} - V_s) - R_x \cdot V_s} - R_z$$

<Internal Parameters of DC-DC Converter>

Product Name(MPDTY__S)		0_1S	0_2S	0_3S	0_4S	0_5S	0_6S	0_7S
Nominal Output Voltage	(V)	1.0	1.2	1.5	1.8	2.0	2.5	3.3
Rx	(KΩ)	4.7	3.6	4.7	4.7	5.6	6.8	8.2
Ry	(KΩ)	29.73	14.64	16.16	8.40	7.00	6.80	4.60
Rz	(KΩ)	1.0	1.0	2.2	5.6	10	15	18
Vs	(V)	0.864	0.963	1.162	1.154	1.111	1.250	1.186

Conversion Efficiency



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