

DC-DC Converter Short Form

MPD7K019S (Small Size & High Efficiency)

■ FEATURES

- High efficiency & Small Size SIL
- Wide input range (17V to 40V)
- Adjustable output voltage (5V , 12V)
- Single output max. 6A
- Metal case type
- Short circuit protection



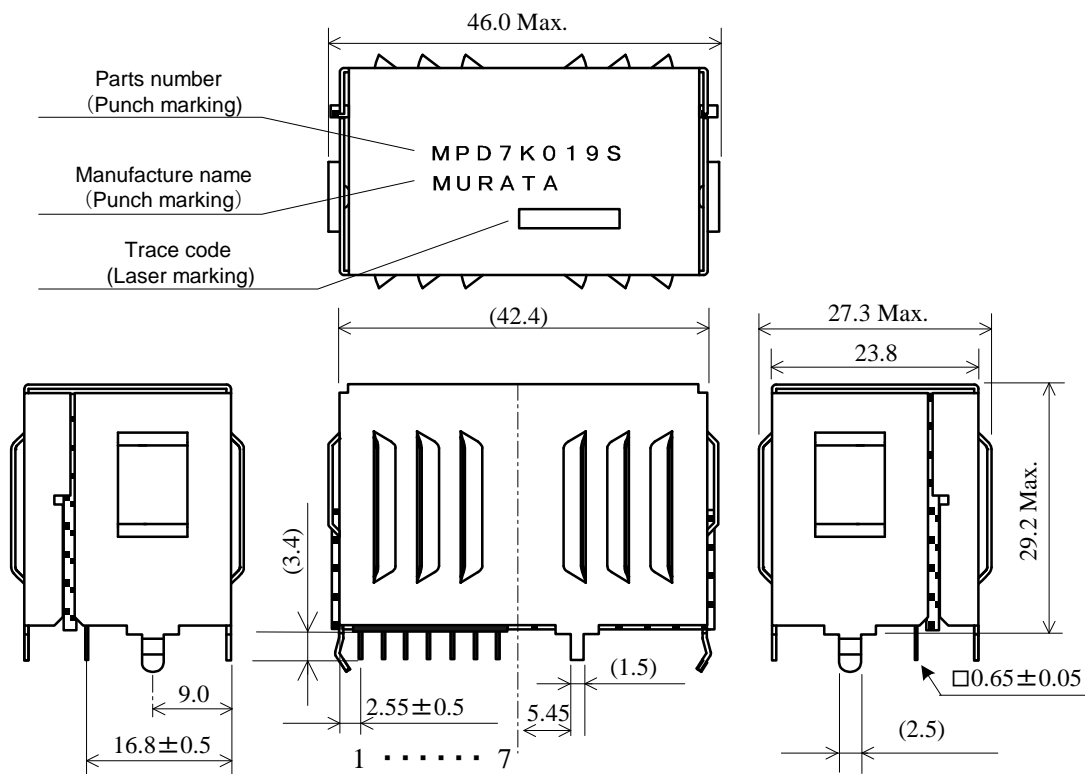
■ GENERAL SPECIFICATIONS (Ta=25°C)

Item	Symbol	Condition		MIN.	TYP.	MAX.	UNIT
Input Voltage	Vin			17.0	24.0	40.0	V
Output Voltage	Vout	Vin=17.0~40.0V, Iout=0~6A	VAR=GND	11.64	12.00	12.36	V
			VAR=Open	4.85	5.00	5.15	
Output Current	Iout	Vin=17.0~40.0V		0	-	6	A
Ripple Voltage	Vrpl	Vin=24V, Iout=6A, BW=20MHz		-	100	-	mVpp
Efficiency	EFF	Vin=24V, Iout=6A, Vout=12V		-	96.5	-	%
Protection Output Current	Iocp	Vin=17.0~40.0V		6.5	-	-	A
Short Circuit Protection	SCP	If output is shorted to GND, DC-DC Converter shall be operated in a hiccup mode. After the short circuit event has cleared, the output is automatically brought back into regulation.					

⚠ 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.

■ DIMENSIONS



Body color : Silver

【Unit : mm】

()...reference value

Lead Pitch : 2.5 ± 0.3mm

Distance between the both roots of Pin.

Tolerance is not accumulated.

The tolerance not specified is ±0.3

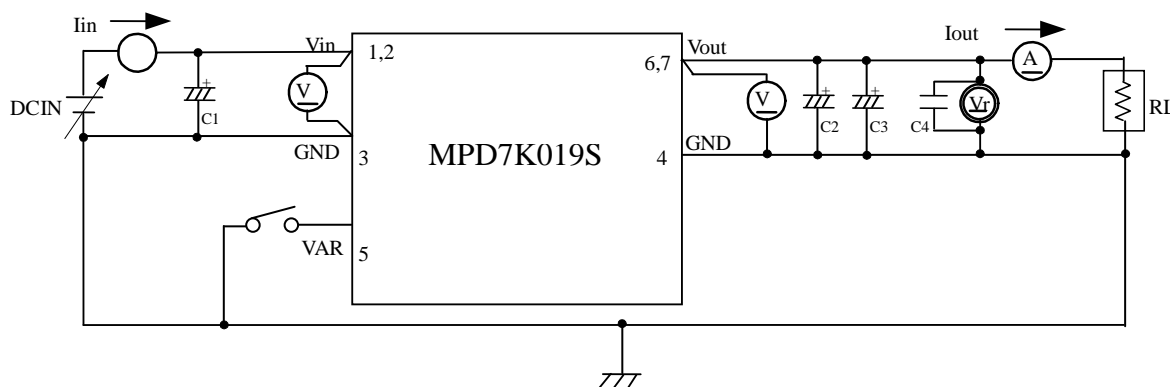
The tolerance not specified is ±0.3

Pin No.	Symbol	Function
1,2	Vin	Input
3,4	GND	GND
5	VAR	Output Voltage Adjust
6,7	Vout	Output

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■ TEST CIRCUIT

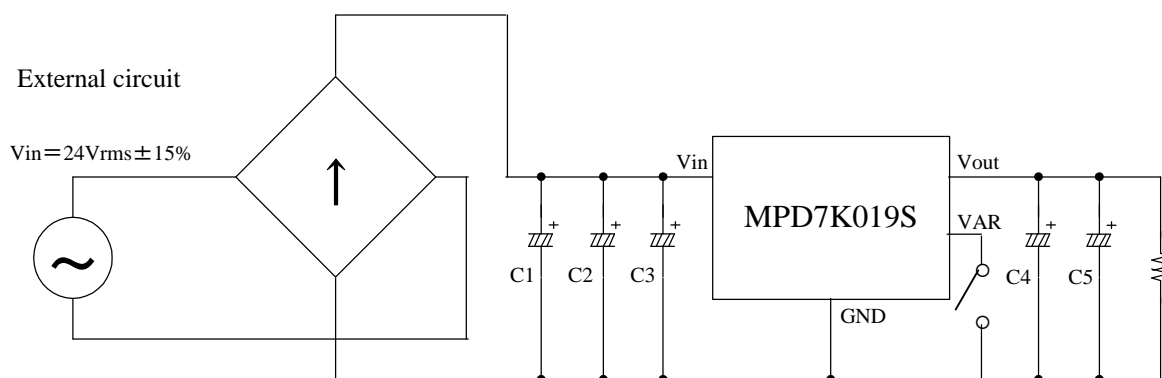


C1 : 1000 μ F/50V Low Impedance Aluminum Electrolytic Capacitor (ZL series : Rubycon)
 C2,C3 : 1000 μ F/16V Low Impedance Aluminum Electrolytic Capacitor (EKZE160ETD102MJ20S NIPPON CHEMI-CON)
 C4 : 0.1 μ F

Please make sure to place C1~C3 nearby input and output terminal of DC-DC converter.

■ INPUT/OUTPUT ALUMINUM ELECTROLYTIC CAPACITOR FOR FULL-WAVE RECTIFIER (REFERENCE)

* When input is AC24V \pm 15% 50Hz or 60Hz full-wave rectifier, please refer following external circuit.

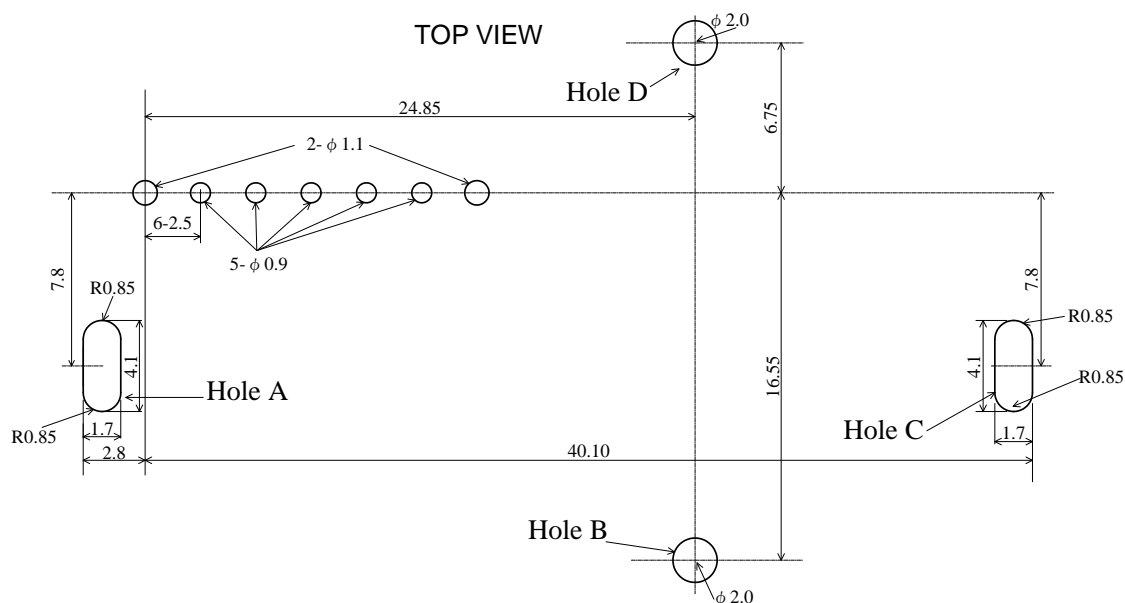


C1,C2,C3 : 1000 μ F/50V Low Impedance Aluminum Electrolytic Capacitor (EKZE500EC3102ML25S NIPPON CHEMI-CON)
 C4,C5 : 1000 μ F/16V Low Impedance Aluminum Electrolytic Capacitor (EKZE160ETD102MJ20S NIPPON CHEMI-CON)


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FOOT PRINT DIMENSIONS

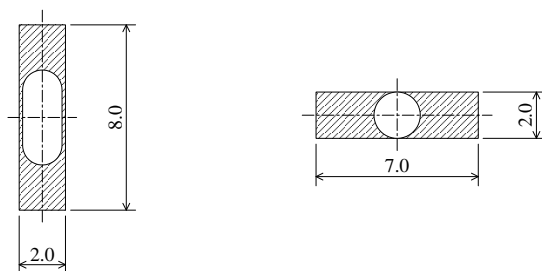


Unit 【mm】

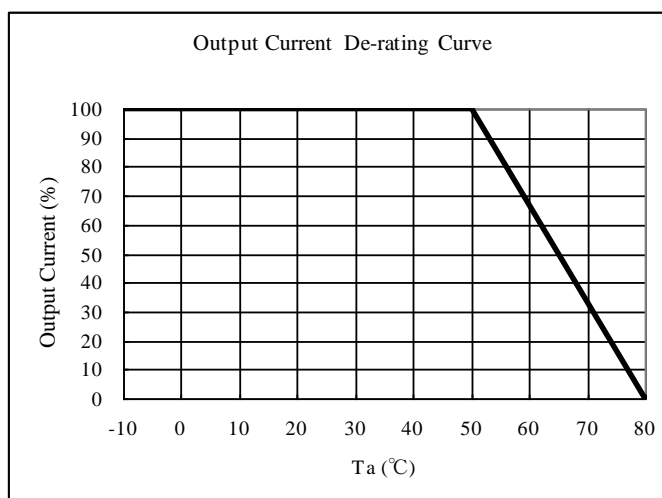
Metal case is connected to GND. So hole A,B,C and D should be connected to GND.
The Area indicated  is allowed no pattern or only GND pattern.

Hole A and C

Hole B and D



THERMAL DERATING

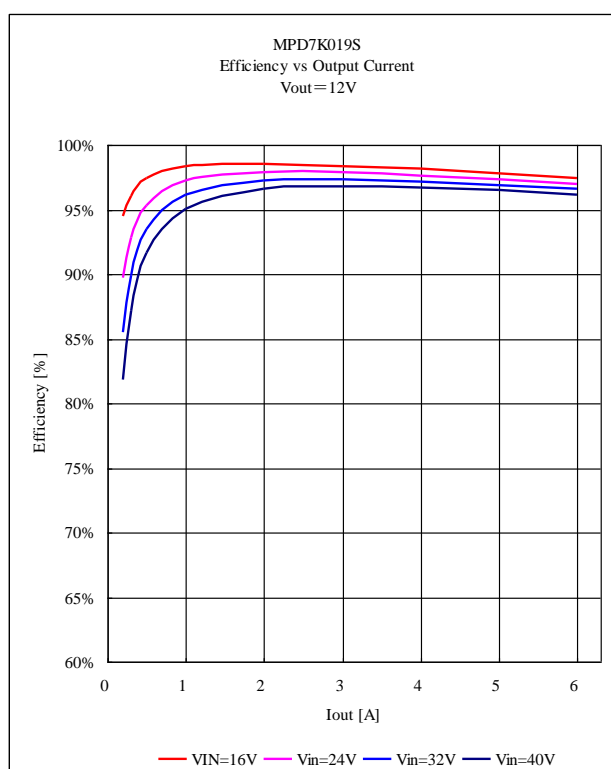
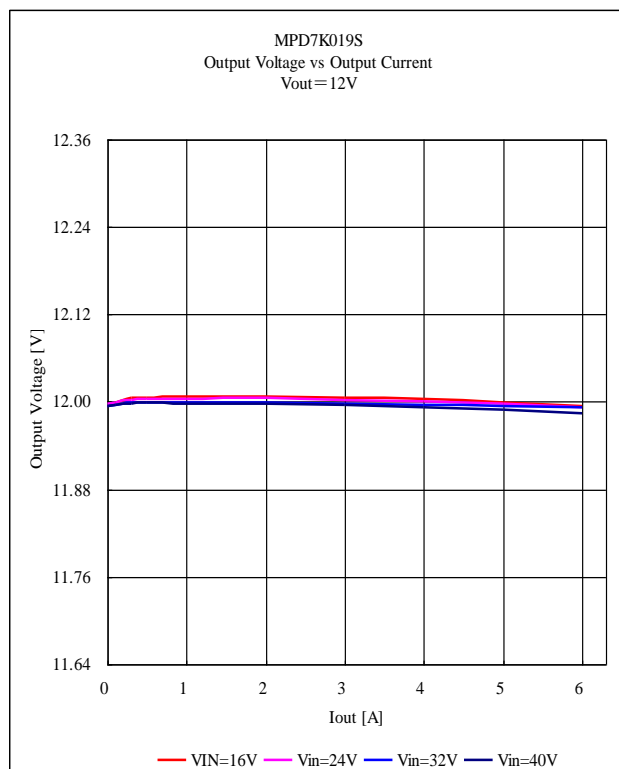


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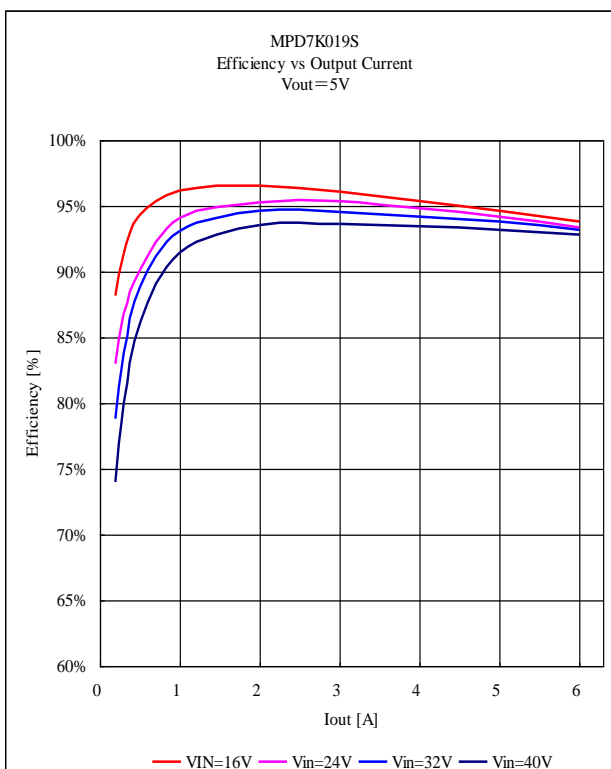
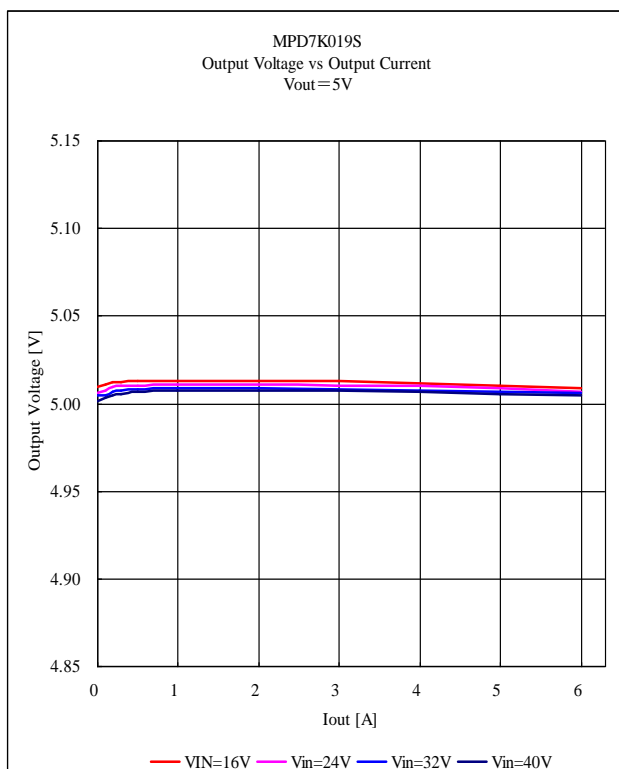
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■ CHARACTERISTICS (Ta=25°C)

1. Vout=12.0V



2. Vout=5.0V



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