

**FEATURES :**

- 24PIN DIP Package
- High Efficiency up to 85%
- Unregulated & Regulated Output Types
- Low Ripple & Noise
- Internal SMD Construction
- Industry Standard Pinout
- Operating Temperature:-40°C to +85°C
- No External Component Required

Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

Part Number	Output Voltage	Output Current	Efficiency
	Vdc	mA	%Typ
41D-XXS05RNL	5	360	58
41D-XXS05NNL	5	360	70
41D-XXD05NNL	±5	±180	70
41D-XXS09RNL	9	200	60
41D-XXS09NNL	9	200	70
41D-XXD09NNL	±9	±100	70
41D-XXS12RNL	12	150	60
41D-XXS12NNL	12	150	75
41D-XXD12RNL	±12	±75	60
41D-XXD12NNL	±12	±75	75
41D-XXS15RNL	15	120	60
41D-XXS15NNL	15	120	75
41D-XXD15RNL	±15	±60	60
41D-XXD15NNL	±15	±60	75
41D-XXS24RNL	24	75	60
41D-XXS24NNL	24	75	80
41D-XXD24RNL	±24	±38	60
41D-XXD24NNL	±24	±38	80

Recognized by UL 60950-1

41D-05S05NNL,41D-05S05RNL,41D-05S09NNL,41D-05S24NNL,  
41D-12S05RNL,41D-24S05NNL,41D-24S24NNL

**Note:**

- 1."XX" Is Input Voltage :05=5Vdc,09=9Vdc,12=12Vdc,15=15Vdc,24=24Vdc.
- 2.The input voltage increases, there will be an increase in efficiency.

**Input Specifications**

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	Vo,Io Nom			±10	%
Filter	Capacitor				

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DC-DC Converter

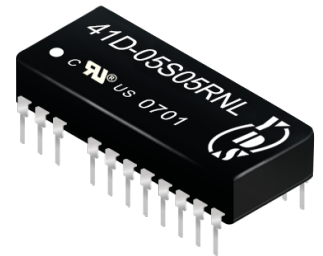
**41D SERIES**

1.8Watt

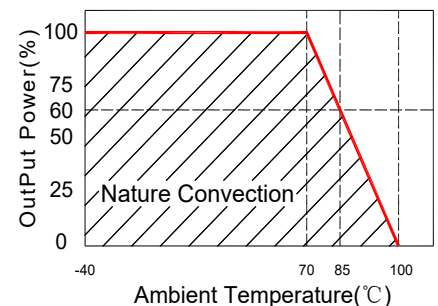
2KVrms Isolated

Single & Dual Output

DIP24



**Temperature Derating Graph**



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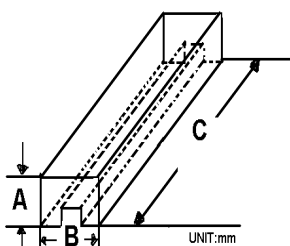
Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	100% full load			±5	%
Short Circuit Protection	Regulated (Continuous)				
Short Circuit Protection	Unregulated (Short Term)			1	Sec
Line Regulation	Regulated			±0.3	%
Load Regulation	Regulated			±0.5	%
Ripple & Noise	BW=DC To 20MHz			50	mVp-p
Line Regulation	Unregulated (For 1% of Vin)		1.2		%
Load Regulation	Unregulated (20% To 100% F.L)			10	%

General Specifications

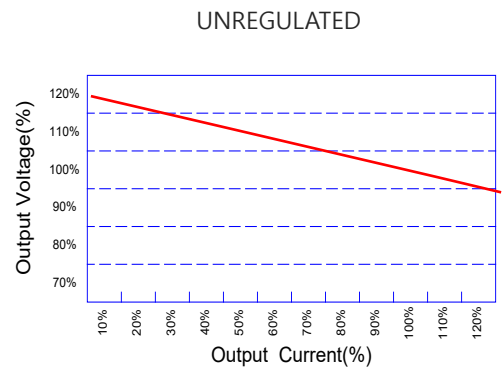
Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Switching Frequency	Full load, nominal input		50		KHz
Operating Temperature		-40		+85	°C
Humidity	Non Condensing			95	%
Cooling	Free air Convection				
Case material	DAP				
MTBF	MIL-HDBK-217F@25°C (Unregulated)	2500000			Hours
MTBF	MIL-HDBK-217F@25°C (Regulated)	1500000			Hours
Weight			9.0		g
Dimensions		33.02X14.73X10.41			mm

Packaging



Size(mm)		
A	B	C
13.23	12.30	530

Tolerance Envelope Graph



Part Number

41D - 05 S 05 R NL  
A B C D E F

A:Series

B:Input Voltage

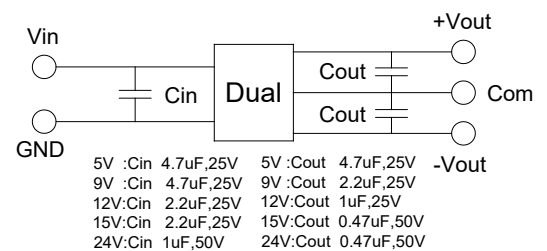
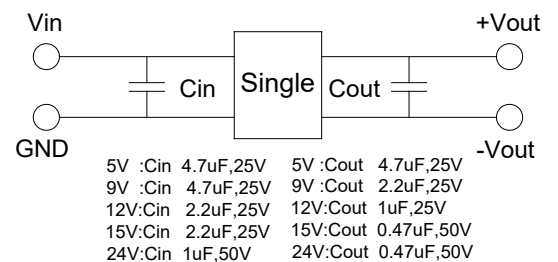
C:Single(S)Dual(D)

D:Output Voltage

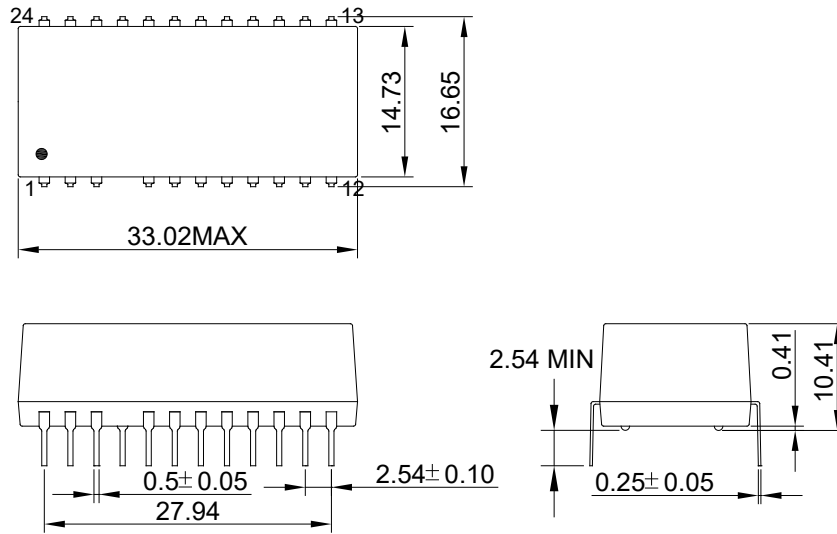
E:Regulated(R)Unregulated(N)

F:RoHS Version

Recommended Test Circuit



Markings and Dimensions



Unit : mm Unless otherwise specified, all tolerances are ±0.25

PIN Connection							
PIN	1,2	9,10	11,12	13,14	15,16	23,24	Other
Single	+Vin	-Vout	+Vout	NC	NC	-Vin	NC
Dual	+Vin	COM	+Vout	COM	-Vout	-Vin	NC