



Wide Input Voltage Range 3 Watt Dc-Dc Converter



FEATURES:

- 2:1 Wide Input Voltage.
- 3 Watt 24PIN DIL Package.
- Efficiency To 80%
- PI Input Filter.
- 1500Vdc Isolation
- MTBF:>1,500,000 hrs
- Operating Temperature:-40°C TO +85°C



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

Part Number	Input Voltage	Output Voltage	Output Current	Efficiency
	Vdc	Vdc	mA	%TYP
68D1-05S05RNL	4.5-9	5	600	75
68D1-05S12RNL	4.5-9	12	250	80
68D1-05S15RNL	4.5-9	15	200	80
68D1-12S05RNL	9-18	5	600	75
68D1-12S12RNL	9-18	12	250	80
68D1-12S15RNL	9-18	15	200	80
68D1-12D05RNL	9-18	±5	±300	75
68D1-12D12RNL	9-18	±12	±125	75
68D1-12D15RNL	9-18	±15	±100	75
68D1-24S05RNL	18-36	5	600	75
68D1-24S12RNL	18-36	12	250	80
68D1-24S15RNL	18-36	15	200	80
68D1-24D05RNL	18-36	±5	±300	75
68D1-24D12RNL	18-36	±12	±125	80
68D1-24D15RNL	18-36	±15	±100	80
68D1-48S05RNL	36-72	5	600	75
68D1-48S12RNL	36-72	12	250	80
68D1-48S15RNL	36-72	15	200	80
68D1-48D05RNL	36-72	±5	±300	75
68D1-48D12RNL	36-72	±12	±125	80
68D1-48D15RNL	36-72	±15	±100	80

Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Types				2:1	
Filter	Capacitor				

Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance				±2	%
Short Circuit Protection	Continuous				
Line Regulation				±0.5	%
Load Regulation	SINGLE			±0.5	%
Load Regulation	DUAL			±2.0	%
Ripple & Noise	BW=DC To 20MHz			100	mVp-p
Transient response setting time	50% load step change		350		us

General Specifications

Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Switching Frequency			200		KHz
Operating Temperature		-40		85	°C
Humidity	Non Condensing			95	%
Cooling	Free air Convection				
Case material	Nickel Coated With Non-Conductive Base or Black Coated Copper With Non-Conductive Base				
Weight			16.2		g
Dimensions			31.80x20.60x10.16		mm



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Temperature Derating Graph	Part Number
	68D1 - <u>12</u> <u>S</u> <u>05</u> <u>R</u> <u>NL</u>
	A B C D E F
	A:Series
	B:Input Voltage
	C:Single(S)Dual(D)
	D:Output Voltage
	E:Regulated(R)
	F:RoHS Version

Recommended Test Circuit

5V&12V :Cin 100uF,25V
24V&48V:Cin 10uF,100V

12V :Cin 100uF,25V
24V & 48V :Cin 10uF,100V

Markings and dimensions	Packaging									
	<table border="1"> <thead> <tr> <th colspan="3">SIZE(mm)</th> </tr> <tr> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>18.71</td> <td>23.00</td> <td>522</td> </tr> </tbody> </table>	SIZE(mm)			A	B	C	18.71	23.00	522
SIZE(mm)										
A	B	C								
18.71	23.00	522								

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

PIN Connection						
PIN	2.3	9	11	14	16	22.23
SINGLE	-Vin	NO PIN	NC	+Vout	-Vout	+Vin
DUAL	-Vin	COM	-Vout	+Vout	COM	+Vin