



Wide Input Voltage Range 12 Watt Dc-Dc Converter



FEATURES:

- 12W DIL PACKAGE
- 2:1 WIDE INPUT RANGE
- 100% BURNED IN
- HIGH EFFICIENCY
- UL94V-0 PACKAGE MATERIAL
- CUSTOM SOLUTIONS AVAILABLE
- RoHS COMPLIANT
- 3 YEARS WARRANTY
- Remote Control:On/Off



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

Part Number	Input Voltage	Input Current		Output Voltage	Output Current	Efficiency
	Vdc	No-Load (mA TYP)	Full Load (mA TYP)	Vdc	Full Load (mA)	%TYP
68D12-12S03RNL	9-18	30	1203	3.3	3500	80
68D12-12S05RNL	9-18	30	1220	5	2400	82
68D12-12S12RNL	9-18	30	1205	12	1000	83
68D12-12S15RNL	9-18	30	1205	15	800	83
68D12-12D05RNL	9-18	30	1205	±5	±1200	83
68D12-12D12RNL	9-18	30	1205	±12	±500	83
68D12-12D15RNL	9-18	30	1205	±15	±400	83
68D12-24S03RNL	18-36	30	602	3.3	3500	80
68D12-24S05RNL	18-36	30	610	5	2400	82
68D12-24S12RNL	18-36	30	602	12	1000	83
68D12-24S15RNL	18-36	30	602	15	800	83
68D12-24D05RNL	18-36	30	602	±5	±1200	83
68D12-24D12RNL	18-36	30	602	±12	±500	83
68D12-24D15RNL	18-36	30	602	±15	±400	83
68D12-48S03RNL	36-75	20	301	3.3	3500	80
68D12-48S05RNL	36-75	20	305	5	2400	82
68D12-48S12RNL	36-75	20	301	12	1000	83
68D12-48S15RNL	36-75	20	301	15	800	83
68D12-48D05RNL	36-75	20	301	±5	±1200	83
68D12-48D12RNL	36-75	20	301	±12	±500	83
68D12-48D15RNL	36-75	20	301	±15	±400	83

Input Specifications					
Parameters	Conditions	Min	Typ	Max	Units
Voltage Types				2:1	
Filter	Pi Network				
Protection	Fuse Recommended				

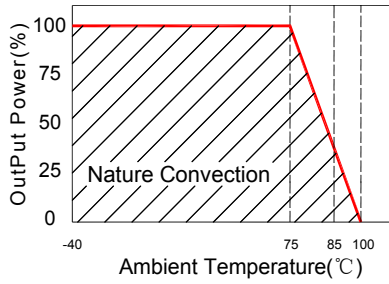
Output Specifications (Temperature Coefficient : ±0.05%/°C)					
Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	Single/Dual			±2	%
Short Circuit/ Restart	Continuous/ Automatic				
Over Load Protection			150		%
Line Regulation	High Line to Low Line			±0.5	%
Load Regulation	Single & Dual (F.L-25%F.L)			±0.5	%
Minimum Load	10% of Full Load				
Ripple & Noise	BW=DC To 20MHz (with 1uF Cap.)			100	mVp-p
Transient response setting time	current change from 25% to 100%			350	us

General Specifications					
Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Switching Frequency			400		KHz
Operating Temperature		-40		100	°C
Humidity	Non Condensing			95	%
Cooling	Free air Convection				
Case material	Five-Side Shielded Case				
Weight			17.5		g
Dimensions	Appearance size		31.6X20.1X10.0		mm
Potting Material			Epoxy (UL94V-0 rated)		
Radiated Emissions	EN55022		CLASS A		
Conducted Emissions	EN55022		CLASS A		
Efficiency		80			%
Isolation Voltage	For 10 seconds			1500	VDC
MTBF	MIL-HDBK-217F @25°C , Ground Benign	900000			Hours
Storage Temperature		-55		+125	°C
Case Temperature				+95	°C

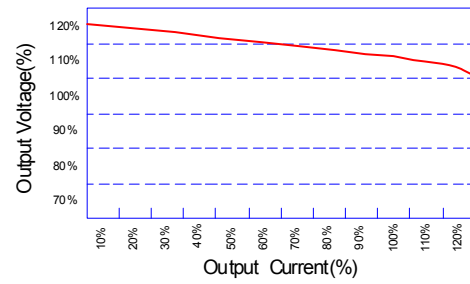


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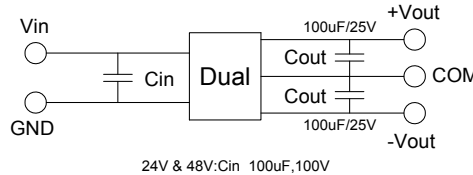
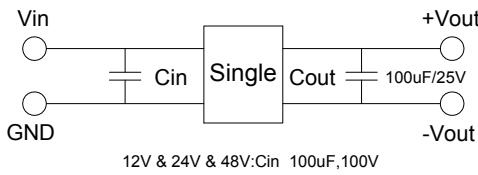
Temperature Derating Graph



Tolerance Envelope Graph



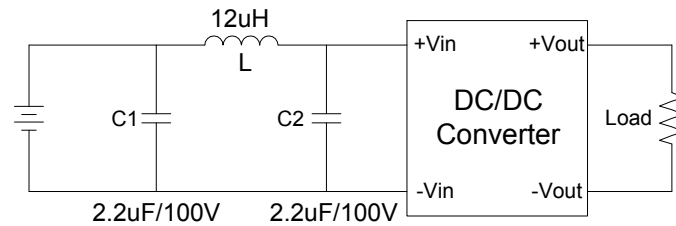
Recommended Test Circuit



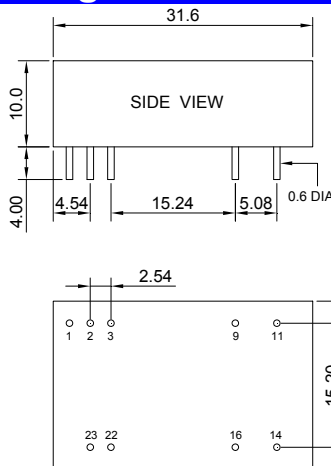
Part Number

68D12- 12 S 03 R NL
 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

Input filter components(C1, C2,L) are used to help meet conducted emissions (EN55022 class A) requirement for the module . These components should be mounted as close as possible to the module; and all leads should be minimized to decrease radiated noise.

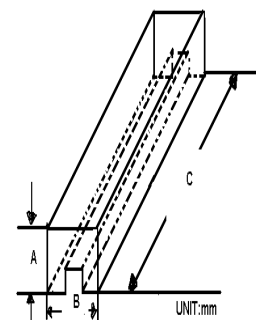


Markings and dimensions



UNIT:mm XX.X±0.5 XX.XX±0.25
 Pin Size Tolerance: 0.6Φ ±0.05mm

Packaging



SIZE(mm)		
A	B	C
18.71	23.00	522

PIN Connection

PIN	1	2.3	9	11	14	16	22.23
SINGLE	Remote On/Off	-Vin	NC	NC	+Vout	-Vout	+Vin
DUAL	Remote On/Off	-Vin	Common	-Vout	+Vout	Common	+Vin