



Wide Input Voltage Range 15 Watt Dc-Dc Converter



FEATURES:

- 15W DIL PACKAGE
- 2:1 WIDE INPUT RANGE
- 100% BURNED IN
- HIGH EFFICIENCY
- UL94V-0 PACKAGE MATERIAL
- CUSTOM SOLUTIONS AVAILABLE
- RoHS COMPLIANT ● Remote Control:On/Off



APPLICATIONS:

- Industry Control System ● Semiconductor Equipment
- Wireless Network ● Telecom/Datacom ● Measurement

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

Part Number	Input Voltage Vdc	Input Current		Output Voltage Vdc	Output Current Full Load (mA)	Efficiency %TYP
		No-Load (mA TYP)	Full Load (mA TYP)			
68D15-12S03RNL	9-18	120	1309	3.3	4000	84
68D15-12S05RNL	9-18	90	1488	5	3000	84
68D15-12S12RNL	9-18	40	1453	12	1250	86
68D15-12S15RNL	9-18	40	1453	15	1000	86
68D15-12D12RNL	9-18	40	1453	± 12	± 625	86
68D15-12D15RNL	9-18	40	1453	± 15	± 500	86
68D15-24S03RNL	18-36	50	654	3.3	4000	84
68D15-24S05RNL	18-36	65	744	5	3000	84
68D15-24S12RNL	18-36	20	710	12	1250	88
68D15-24S15RNL	18-36	20	710	15	1000	88
68D15-24D12RNL	18-36	20	718	± 12	± 625	87
68D15-24D15RNL	18-36	20	726	± 15	± 500	86
68D15-48S03RNL	36-75	40	327	3.3	4000	84
68D15-48S05RNL	36-75	40	372	5	3000	84
68D15-48S12RNL	36-75	15	363	12	1250	86
68D15-48S15RNL	36-75	15	355	15	1000	88
68D15-48D12RNL	36-75	15	359	± 12	± 625	87
68D15-48D15RNL	36-75	15	363	± 15	± 500	86

Input Specifications					
Parameters	Conditions	Min	Typ	Max	Units
<b>Voltage Types</b>				2:1	
Start-up voltage / under voltage shut down	12 Vin		9 / 8		VDC
	24 Vin		17.0 / 16.5		VDC
	48 Vin		33.0 / 30.5		VDC
Filter	Pi Network				
Protection	Fuse Recommended				

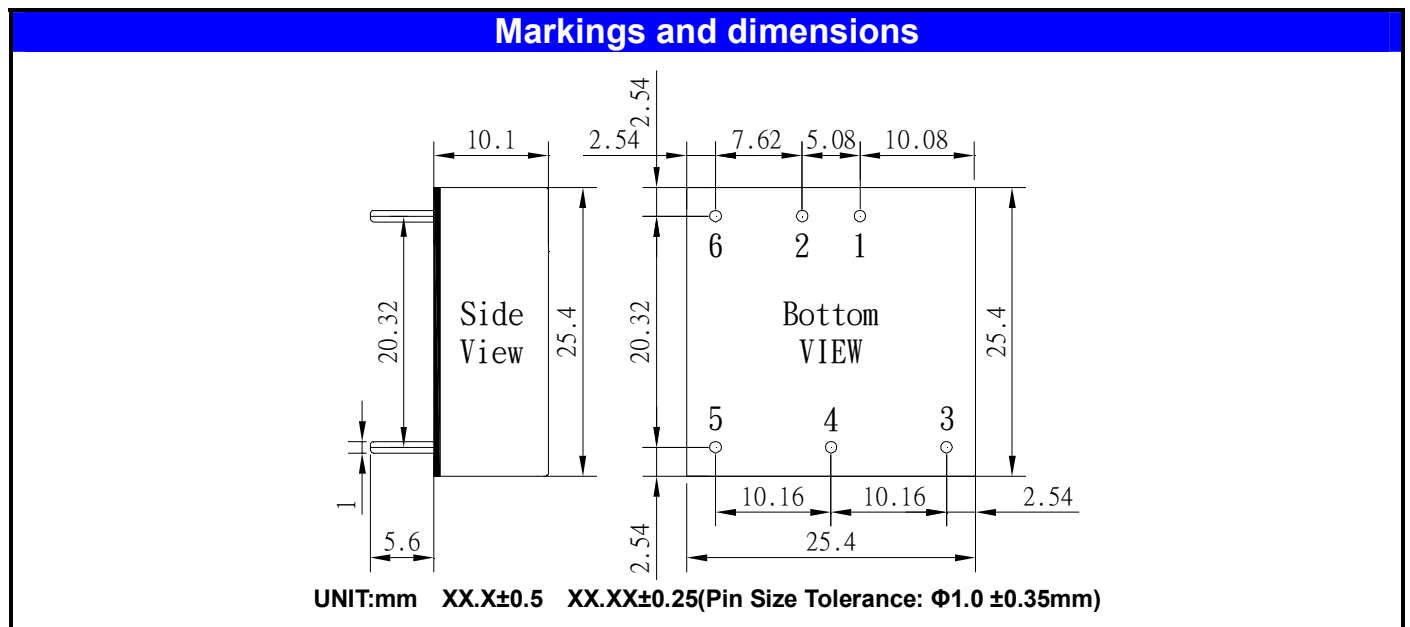
Output Specifications (Temperature Coefficient : ±0.05%/°C)					
Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance				±2	%
Output voltage adj. range	only for single output models			±10	%
Line Regulation (Vmin – Vmax)	single output			0.5	%
	dual output			0.5	%
Load Regulation (25 %F.L– 100%F.L)	single output			0.5	%
	dual output models balanced load			1.0	%
Minimum load	required	0		10	%
Ripple and noise(20 MHz bandwidth)	with external capacitor see application note.			100	mVp-p
Output current limitation		at 150 % typ. of lout max., constant current			
Short circuit protection		automatic recovery			
Over voltage protection	3.3VDC	3.7		5.4	Vout
	5VDC	5.6		7.0	Vout
	12VDC	13.5		19.6	Vout
	15VDC	16.8		20.5	Vout
Start up time	nominal Vin and constant resistive load		450		ms
Transient response setting time	25% load step change		250		us
Max. capacitive load	3.3 & 5 VDC		1000		uF
	12 VDC		330		uF
	15 VDC		220		uF
	±12 VDC		±150		uF
	±15 VDC		±100		uF



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General Specifications					
Parameters	Conditions	Min	Typ	Max	Units
Temperature ranges	Operating(with derating)	-40		+85	°C
	Case temperature			+100	°C
	Storage	-55		+125	°C
Humidity	non condensing	5		95	%
Reliability, calculated MTBF	MIL-HDBK-217F, @ +25° C, ground benign	560000			Hours
Isolation voltage	For 60 seconds(Input/Output)			1500	VDC
Isolation capacity	Input/Output		1000		pF
Isolation resistance	Input/Output (500 VDC)	1000			MΩ
Remote On/Off	On	3.0 ... 12 VDC or open circuit			
	Off	0 ... 1.2 VDC or short circuit pin 6 and pin 2			
	Off idle current:		2.5		mA
Switching frequency (fixed)	pulse width modulation PWM		400		KHz
Case material		nickel coated copper			
Baseplate		non conductive FR4			
Potting material		epoxy (UL 94V-0 rated)			
Weight		15 g (0.53 oz)			
Soldering temperature		max. 265°C/ 10sec			

Temperature Derating Graph	Part Number
	68D15 - <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



PIN Connection						
PIN	1	2	3	4	5	6
SINGLE	+Vin	-Vin	+Vout	Trim	-Vout	Remote On/Off
DUAL	+Vin	-Vin	+Vout	COM	-Vout	Remote On/Off