

**FEATURES:**

- 4:1 Wide Input Voltage
- 3~6 Watt 24PIN DIL Package
- Efficiency to 85%
- Transformer creepage distance is 8mm
- Transformer clearance is 5mm
- Reinforced isolation, I/O isolation test voltage:5.2KVac and 2MOPP high isolation
- Input under-voltage protection, output short-circuit, over-current, over-voltage protection
- Operating Temperature:-40°C to +85°C

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

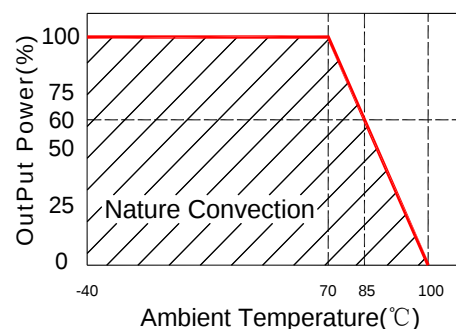
Part Number	Input Voltage	Output Voltage	Output Current	Input Current		Efficiency	Capacitive Load(μF)	Package Style
				No Load	Full Load			
	Vdc	Vdc	mA	mA	%TYP	%TYP	Max.	
68DC-24S03RXYM	9-36	3.3	1500	5	271.4	76	2700	1/2
68DC-24S05RXYM	9-36	5	1200	5	308.6	81	2700	1/2
68DC-24S09RXYM	9-36	9	667	5	301.4	83	1800	1/2
68DC-24S12RXYM	9-36	12	500	5	297.6	84	1000	1/2
68DC-24S15RXYM	9-36	15	400	5	294.1	85	680	1/2
68DC-24S24RXYM	9-36	24	250	5	297.6	84	470	1/2
68DC-24D05RXYM	9-36	±5	±600	5	308.6	81	±1000	1/2
68DC-24D09RXYM	9-36	±9	±333	5	301.4	83	±680	1/2
68DC-24D12RXYM	9-36	±12	±250	5	294.1	85	±470	1/2
68DC-24D15RXYM	9-36	±15	±200	5	294.1	85	±330	1/2
68DC-48S03RXYM	18-75	3.3	1500	5	132.2	78	2700	1/2
68DC-48S05RXYM	18-75	5	1200	5	152.4	82	2700	1/2
68DC-48S09RXYM	18-75	9	667	5	150.7	83	1800	1/2
68DC-48S12RXYM	18-75	12	500	5	148.8	84	1000	1/2
68DC-48S15RXYM	18-75	15	400	5	147.1	85	680	1/2
68DC-48S24RXYM	18-75	24	250	5	148.8	84	470	1/2
68DC-48D05RXYM	18-75	±5	±600	5	152.4	82	±1000	1/2
68DC-48D09RXYM	18-75	±9	±333	5	150.7	83	±680	1/2
68DC-48D12RXYM	18-75	±12	±250	5	148.8	84	±470	1/2
68DC-48D15RXYM	18-75	±15	±200	5	147.1	85	±330	1/2

Note:

1. X= 1 or 2 for package , No suffix x package1 , When x =2 , package2 , and so on , e.g.68DC-48S05R26M.
2. Y indicates that the power can be 3~6: 3=3W, 4=4W, 5=5W, 6=6W.

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DC-DC Converter

68DC-RXXM SERIES**3~6Watt****6KVdc/ 5.2KVac Isolated****4:1 Input Voltage Range****Single & Dual Output****Temperature Derating Graph****CONTACT US**

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Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Types	Others input			4:1	
Filter	Pi filter				
Surge Voltage	24VDC (1sec. max.)			50	V
	48VDC (1sec. max.)			80	V
Start-up Voltage	24VDC			9	V
	48VDC			18	V
Input Under-voltage Protection	24VDC		7		V
	48VDC		15		V

Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance			±1	±3	%
Short Circuit Protection	Input voltage range	Continuous			
Over-voltage Protection		110		160	%Vo
Over-current Protection		110	140	210	%Io
Temperature Coefficient	Full load			±0.03	%/°C
Line Regulation				±0.5	%
Load Regulation	Single (F.L To 10% Load)			±0.8	%
Load Regulation	Dual (F.L To 10% Load)			±1.0	%
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 Voltage	Input to Output(60sec/0.5mA)	6000			Vdc
Isolation Voltage	Input to Output(60sec/0.5mA)	5200			Vac
Isolation Voltage	Input to Output(1sec/0.5mA)	10000			Vdc
Isolation Resistance	500Vdc	10000			MΩ
Isolation Capacitance	Input-output capacitance at 100kHz/0.1V		20		pF
Leakage Current	240VAC/60Hz		4		uA
Reinforced Isolation	Transformer creepage	8			
	Transformer clearance	5			
	PCB creepage & clearance	8			
	Optocoupler creepage	8			
Switching Frequency			330		KHz
Operating Temperature	Temperature Derating Graph	-40		85	°C
Storage Temperature		-55		+125	°C
Pin Soldering Resistance Temperature	Soldering spot is 1.5mm away from case for 10			+300	°C
Humidity	Non Condensing			95	%
Cooling	Free air Convection				
Safety Standard		EN60601-1 : 2006+A1 : 2013			
Application Part		CF Type			
Insulation Protection Grade	240VAC/60Hz		2×MOPP		
Case material	Packing1/2		DAP		
Weight	Packing1/2		12.8		g

Part Number

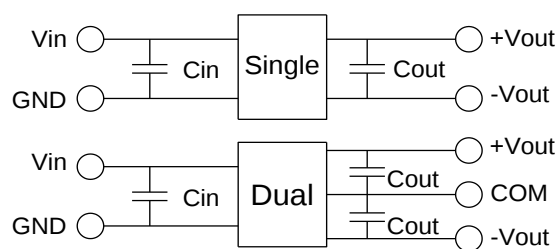
68DC	-	24	S	12	R	X	Y	M
A		B	C	D	E	F	G	H

- A : Series
 B : Input Voltage
 C : Single(S); Dual(D) Output
 D : Output Voltage
 E : Regulated(R)
 F : Package (1/2)
 G : Output Power (3、4、5、6)
 H : Medical

Electromagnetic Compatibility (EMC)

EMI	CE	CISPR32/EN55032 (EMC (CLASS B) compliance circuit)
	RE	CISPR32/EN55032 (EMC (CLASS B) compliance circuit)
EMS	ESD	IEC/EN61000-4-2 Contact ±6kVperf. Criteria B
	EFT	IEC/EN61000-4-4 ±2KV perf. Criteria B
	Surge	IEC/EN61000-4-5 ±2KV perf. Criteria B
	CS	IEC/EN61000-4-6 3 Vr.m.s perf. Criteria A

Recommended Test Circuit



Vin	Cin	Single Vout	Cout	Dual Vout	Cout
24Vdc	10μF/100V	3.3Vdc	100μF/50V	±5Vdc	±100μF/50V
48Vdc	10μF/100V	5Vdc		±12Vdc	
		6Vdc		±15Vdc	
		9Vdc		--	
		12Vdc		--	
		15Vdc		--	
		18Vdc		--	
		24Vdc		--	

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EMC (CLASS B) Compliance Circuit

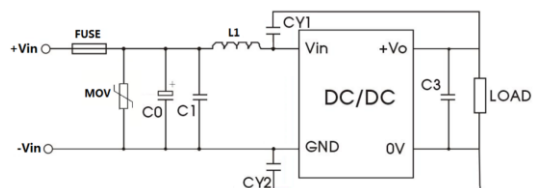


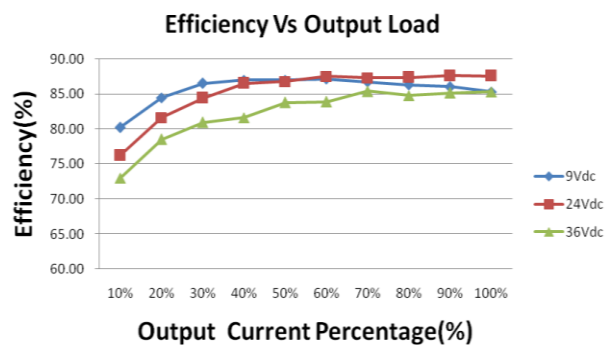
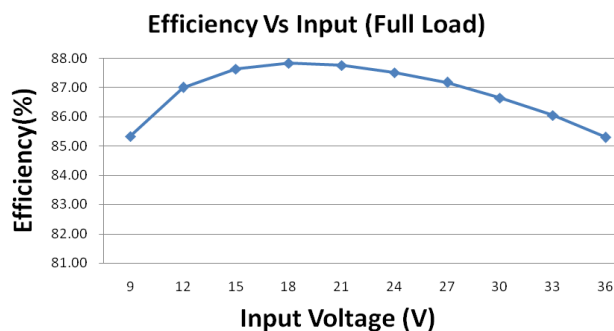
Fig.1

FUSE : Choose according to actual input current

Single Output Models Parameter description:			Dual Output Models Parameter description:	
Fig.1				
Model	Vin: 24VDC	Vin: 48VDC	Vin: 24VDC	Vin: 48VDC
MOV	S20K30	S14K60	S20K30	S14K60
C0	330μF/50V	100μF/100V	330μF/50V	330μF/100V
C1,C2	2.2μF/50V	2.2μF/100V	1μF/50V	1μF/100V
C3	Recommended Test Circuit			
L1	10μH			
CY1,CY2	1nF			

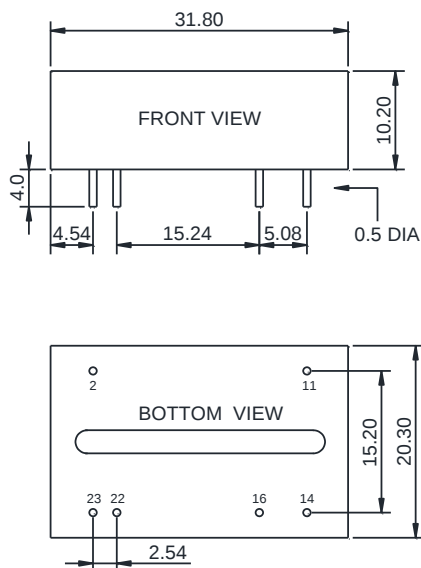
Typical Characteristic Curves

24S15-6W

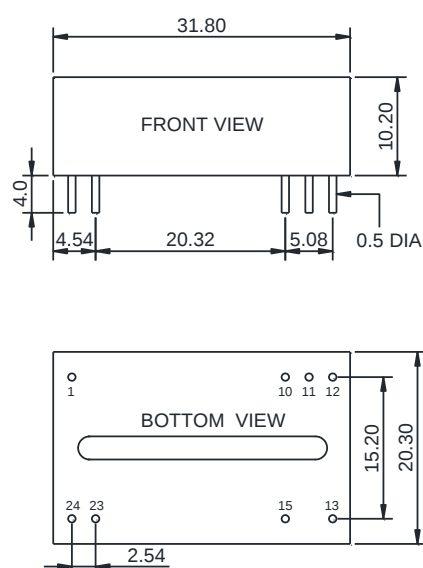


Markings and Dimensions

Packing 1



Packing2



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

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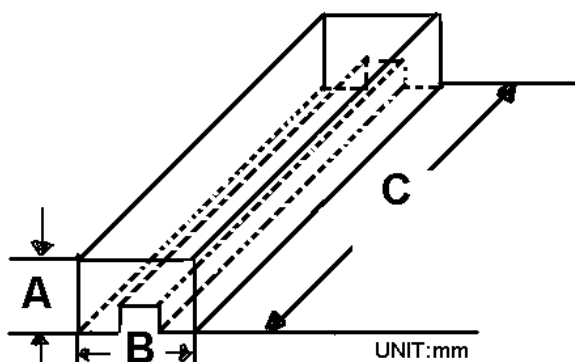
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PIN Connection

PIN		1	2	10	11	12	13	14	15	16	22	23	24
Packing 1	SINGLE	--	-Vin	--	NC	--	--	+Vout	--	-Vout	+Vin	+Vin	--
	DUAL	--	-Vin	--	-Vout	--	--	+Vout	--	COM	+Vin	+Vin	--
Packing 2	SINGLE	+Vin	--	NP	NP	-Vout	+Vout	--	NP	--	--	-Vin	-Vin
	DUAL	+Vin	--	COM	COM	NC	-Vout	--	+Vout	--	--	-Vin	-Vin

Packing Information



TUBE-----15pcs

Size(mm)		
A	B	C
18.71	23.00	522

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