

**FEATURES :**

- 4:1 Wide Input Voltages Range
- High Efficiency Up to 87%
- Regulated Output Types
- Low Ripple and Noise
- Internal SMD Construction
- 1.6KVDC Isolation
- Operating Temperature : -40°C to +85°C
- Industry Standard Pinout
- Continuous Short Circuit Protection with Current Foldback

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

Part Number	Input Voltage Range	Output Voltage Range	Output Current	Efficiency	Capacitive Load(μF)
	Vdc	Vdc	mA	%TYP	Max.
27DC-24S03RX	9-36	3.3	1300	77	1800
27DC-24S05RX	9-36	5	1200	82	1000
27DC-24S09RX	9-36	9	667	83	470
27DC-24S12RX	9-36	12	500	85	470
27DC-24S15RX	9-36	15	400	85	220
27DC-24S24RX	9-36	24	250	85	100
27DC-24D05RX	9-36	±5	±600	81	470
27DC-24D09RX	9-36	±9	±333	83	220
27DC-24D12RX	9-36	±12	±250	85	120
27DC-24D15RX	9-36	±15	±200	86	100
27DC-24D24RX	9-36	±24	±125	84	68
27DC-48S03RX	18-75	3.3	1600	78	1200
27DC-48S05RX	18-75	5	1200	82	680
27DC-48S09RX	18-75	9	667	84	330
27DC-48S12RX	18-75	12	500	86	330
27DC-48S15RX	18-75	15	400	87	150
27DC-48S24RX	18-75	24	250	87	68
27DC-48D05RX	18-75	±5	±600	82	470
27DC-48D09RX	18-75	±9	±333	84	220
27DC-48D12RX	18-75	±12	±250	86	100
27DC-48D15RX	18-75	±15	±200	86	68

NOTE : X indicates that the power can be 4~6:4=4W, 5=5W, 6=6W

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DC-DC Converter

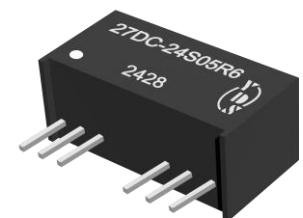
27DC-6W SERIES

4~6Watt 1.6KV Isolated

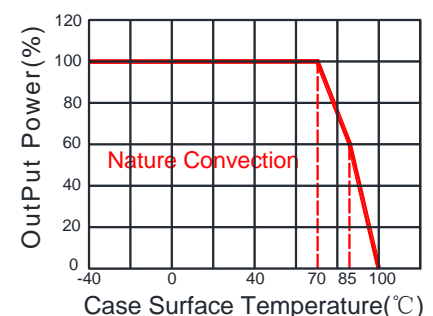
4 : 1 Input Voltage Range

Single / Dual Output

SIP8



Temperature Derating Graph



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Rev:0 2024/07/11

**Input Specifications**

Parameters	Conditions	Min	Typ	Max	Units
<b>Voltage Tolerance</b>	Vo, Io Nom			4:1	
<b>Surge Voltage (1sec max)</b>	24 Vin			50	Vdc
	48 Vin			80	Vdc
<b>Input Current</b>	LOAD:0%		5		mA
<b>Start-up Time</b>	24 Vin			9	Vdc
	48 Vin			18	Vdc
<b>Shutdown Voltage</b>	24/48 Vin	6.5/14.5			Vdc
<b>Start-up Time</b>	Nominal input voltage & Nominal load		20		ms
<b>CTRL</b>	Module on		Ctrl pin open		
	Module off		Ctrl pin to 2.5 ~ 12Vdc		
<b>Filter</b>	Capacitor				

**Output Specifications**

Parameters	Conditions	Min	Typ	Max	Units
<b>Voltage Tolerance</b>	100% full load		2	±3	%
<b>Line Regulation</b>	Regulated			±1.0	%
<b>Load Regulation</b>	Regulated			±1.5	%
<b>Ripple &amp; Noise</b>	BW=DC To 20MHz			150	mVp-p
<b>Transient response setting time</b>	50% load step change		350		us
<b>Cross Regulation</b>	Dual outputs, Vo1 load at 50%, Vo2 load at range of 10%-100%			±5	%
<b>Temperature Coefficient</b>	100% Load		±0.02	±0.03	%/°C
<b>Over-current Protection</b>	Input voltage range	110		250	%Io
<b>Short Circuit Protection</b>	Input voltage range		Continuous, self-recovery		

**General Specifications**

Parameters	Conditions	Min	Typ	Max	Units
<b>Isolation Resistance</b>	500Vdc	1000			MΩ
<b>Isolation Voltage</b>	Input / Output		1600Vdc/ 0.5mA/60Sec		
<b>Isolation Capacitance</b>	Input-output capacitance at 100kHz/0.1V		1000		pF
<b>Switching Frequency</b>	Full load, nominal input		330		KHz
<b>Operating Temperature</b>	Temperature Derating Graph	-40		85	°C
<b>Storage Temperature</b>		-55		125	°C
<b>Humidity</b>	Non Condensing			95	%
<b>Cooling</b>	Free air Convection				
<b>Case material</b>	DAP				
<b>MTBF</b>	MIL-HDBK-217F@25°C	1500000			Hours
<b>Weight</b>			4.5		g
<b>Dimensions</b>			21.8x9.2x11.1		mm

**Part Number**

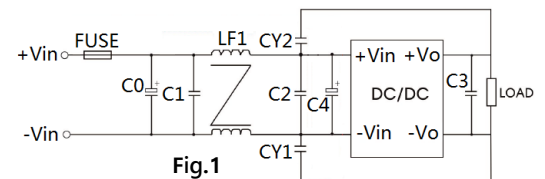
27DC	-	XX	X	XX	R	X
A		B	C	D	E	F

A: Series  
 B: Input Voltage  
 C: Single(S)/Dual(D) Output  
 D: Output Voltage  
 E: Regulated(R)  
 F: Output Power (4/5/6)

**Electromagnetic Compatibility (EMC)**

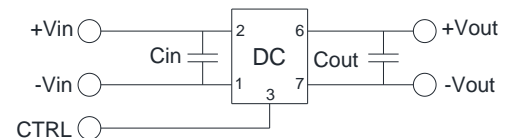
Parameters	Standards & Level
<b>EMI</b>	CISPR32/EN55032 CLASS B (see Fig.1 for recommended circuit)
<b>EMS</b>	CISPR32/EN55032 CLASS B
<b>ESD</b>	IEC/EN61000-4-2 Contact ±4kV perf. Criteria B
<b>Radiated immunity</b>	IEC/EN61000-4-3 10V/m perf. Criteria A
<b>Fast transient</b>	IEC/EN61000-4-4 ±2kV perf. Criteria B
<b>Surge</b>	IEC/EN61000-4-5 ±2kV perf. Criteria B
<b>CS</b>	IEC/EN61000-4-6 3 Vr.m.s perf. Criteria A

**EMC Compliance Circuit**



EMI	Component	Value
	C0C4	330μF /100V
	C1C2	10μF /100V
	CY1CY2	1nF/2kV
	C3	Recommended Test Circuit
	LF1	470μH

**Recommended Test Circuit**

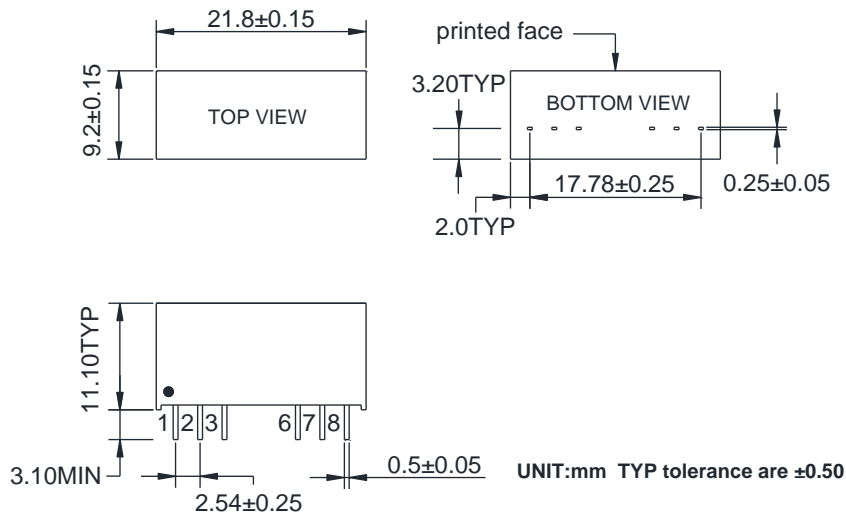


To make sure the product work at perfect operation status with full loading external capacitor is necessary and it is recommended to use high

Vin	Cin	Single Vout	Cout	Dual Vout	Cout
24Vdc	10μF/100V	3.3Vdc	100μF/16V	±5Vdc	±100μF/16V
		5Vdc	100μF/16V	±9Vdc	±100μF/16V
48Vdc	10μF/100V	9Vdc	100μF/16V	±12Vdc	±100μF/25V
		12Vdc	100μF/25V	±15Vdc	±100μF/25V
--	--	15Vdc	100μF/25V	±24Vdc	±100μF/50V
--	--	24Vdc	100μF/50V	--	--



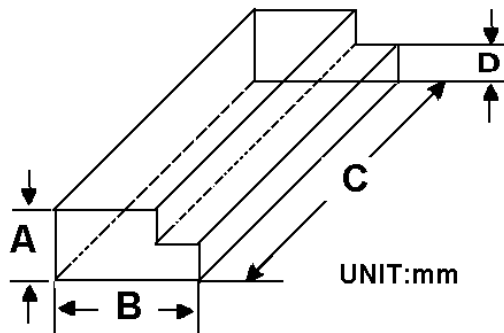
Markings and Dimensions



PIN Connection

Pin	1	2	3	6	7	8
Single	-Vin	+Vin	Ctrl	+Vout	-Vout	NC
Dual	-Vin	+Vin	Ctrl	+Vout	COM	-Vout

Packaging



TUBE-----22pcs

Size(mm)			
A	B	C	D
12.0	28.55	550	6.00