

FEATURES :

- 10:1 Wide Input Voltages Range
- High Efficiency up to 88%
- Regulated Output Types
- Low Ripple And Noise
- Internal SMD Construction
- 1.5KVDC 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

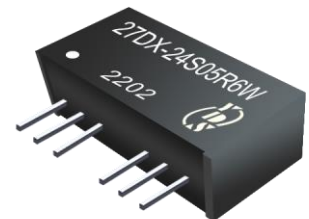
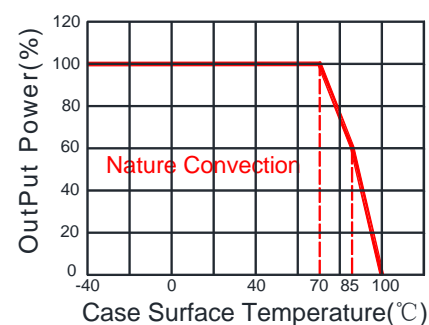
Part Number	Input Voltage Range	Output Voltage Range	Output Current	Efficiency	Capacitive Load(μF)
	Vdc	Vdc	mA	%TYP	Max.
27DX-24S03R6W	6-60	3.3	1600	85	1000
27DX-24S05R6W	6-60	5	1200	88	1000
27DX-24S09R6W	6-60	9	667	85	820
27DX-24S12R6W	6-60	12	500	87	680
27DX-24S15R6W	6-60	15	400	87	680
27DX-24S24R6W	6-60	24	250	87	330

Note:

1. 50% load when Vin is less than 9Vdc.
2. Ripple and ripple noise is measured by using test board with ceramic capacitor 1 μF at 50mm from output pins.

Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	Vo, Io Nom			10:1	
Surge Voltage (100ms max)				76	Vdc
Input Current	LOAD:0%			5	mA
Start-up Time				6	Vdc
Start-up Time	Nominal input voltage & Nominal load		20		ms
CTRL	Module on	0 ~ 0.8Vdc or open circuit			
	Module off	2.5 ~ 12Vdc			
Filter	Capacitor				

YUAN DEAN SCIENTIFIC**DC-DC Converter
27DX-6W SERIES****6Watt****1.5KV Isolated
Single Output
SIP8****Temperature Derating Graph**www.yds.com.tw

TEL : 886-6-3842899

FAX : 886-6-3843288

E-MAIL: ydsweb@yds.com.tw

Rev: 0 2022/1/11

Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	100% full load			±3	%
Line Regulation	Regulated			±0.5	%
Load Regulation	Regulated			±0.8	%
Ripple & Noise	BW=DC To 20MHz			300	mVp-p
Temperature Coefficient	100% Load		±0.02	±0.03	%/°C
Over-current Protection	9~60Vdc	110		250	%Io
Over-voltage Protection	9~60Vdc	110		160	%Vo
Short Circuit Protection	9~60Vdc	Continuous, Recovers automatically after fault condition is removed			

General Specifications

Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Isolation Voltage	Input / Output	1500Vdc/ 0.5mA/60Sec			
Switching Frequency	Full load, nominal input		220		KHz
Operating Temperature		-40		+85	°C
Humidity	Non Condensing			95	%
Cooling		Free air Convection			
Case material		DAP			
MTBF	MIL-HDBK-217F@25°C	1500000			Hours
Weight			4.5		g
Dimensions		21.8X9.2X11.1			mm

Electromagnetic Compatibility (EMC)

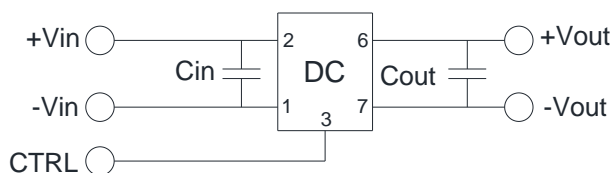
Parameters	Standards & Level
EMI	EN55032(see Fig.1 for recommended circuit)
EMS	EN55024
ESD	EN61000-4-2 Contact ±4kV
Radiated immunity	EN61000-4-3 10V/m
Fast transient	EN61000-4-4 ±2kV
Surge	EN61000-4-5 ±2kV

Part Number

27DX - 24 S 05 R 6W
A B C D E F

A:Series
B:Input Voltage
C:Single Output
D:Output Voltage
E:Regulated(R)
F:Output Power

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
24Vdc	10µF/100V	3.3Vdc	100µF/16V
--	--	5Vdc	100µF/16V
--	--	9Vdc	100µF/16V
--	--	12Vdc	100µF/25V
--	--	15Vdc	100µF/25V
--	--	24Vdc	100µF/50V

EMC Compliance Circuit

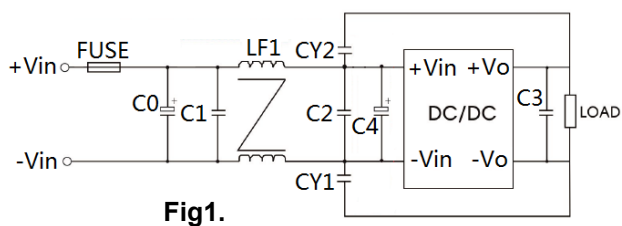
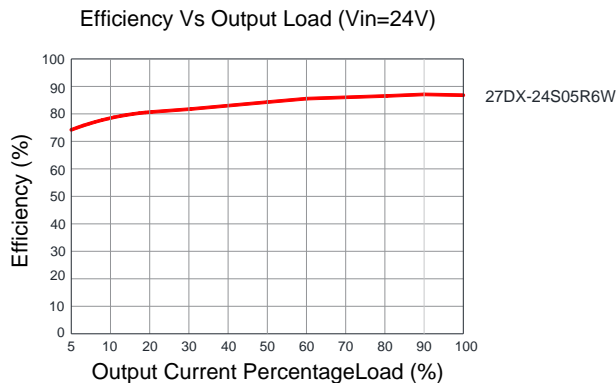
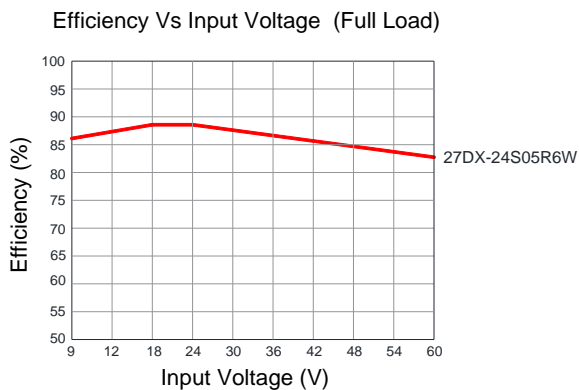


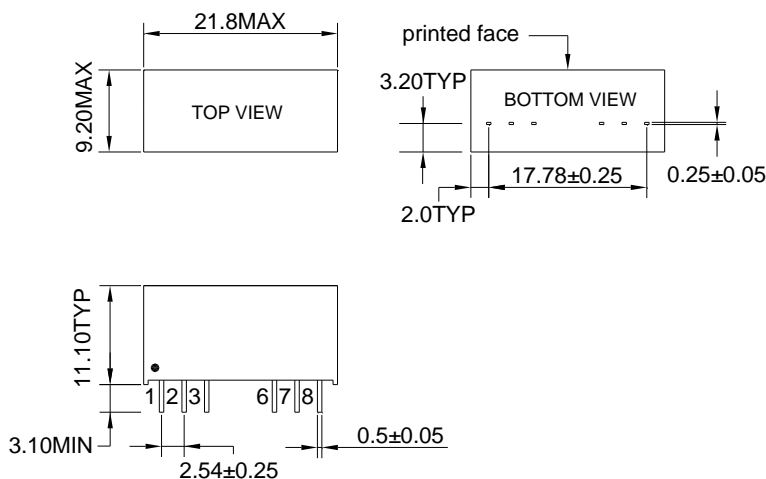
Fig1.

EMC recommended circuit value table		
EMI	C0C4	330µF /100V
	C1C2	10µF /100V
	CY1CY2	1nF/2kV
	C3	Recommended Test Circuit
	LF1	470µH*2

Typical Characteristic Curves

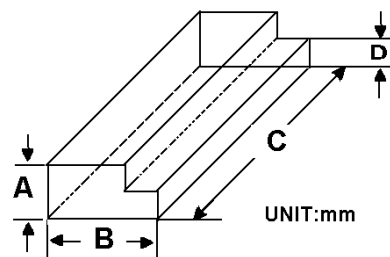


Markings and Dimensions



UNIT:mm TYP tolerances are ± 0.5

Packaging



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

PIN Connection

PIN	1	2	3	6	7	8
Single	-Vin	+Vin	Ctrl-Control input can (can be left open)	+Vout	-Vout	NC