

FEATURES :

- 2:1Wide Input Voltages Range
- High Efficiency up to 85%
- Regulated Output Types
- Low Ripple and Noise
- Internal SMD Construction
- 1KVDC & 3KVDC Isolation
- Operating Temperature:-40°C to +85°C
- Industry Standard Pinout
- Continuous Short Circuit Protection with Current Foldback

YUAN DEAN SCIENTIFIC



DC-DC Converter

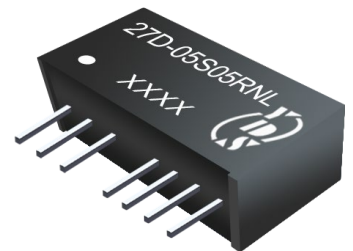
27D-Single SERIES

2Watt 1KV & 3KV Isolated

2 : 1 Input Voltage Range

Single Output

SIP7



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

Part Number	Input Voltage	Output Voltage	Output Current	Efficiency
	Vdc	Vdc	mA	%TYP
27D-05S05R (NL/3KV)	5-9	5	400	65
27D-05S09R (NL/3KV)	5-9	9	222	70
27D-05S12R (NL/3KV)	5-9	12	167	70
27D-05S15R (NL/3KV)	5-9	15	133	70
27D-05S24R (NL/3KV)	5-9	24	84	70
27D-12S05R (NL/3KV)	9-18	5	400	70
27D-12S09R (NL/3KV)	9-18	9	222	80
27D-12S12R (NL/3KV)	9-18	12	167	80
27D-12S15R (NL/3KV)	9-18	15	133	80
27D-12S24R (NL/3KV)	9-18	24	84	80
27D-24S05R (NL/3KV)	18-36	5	400	75
27D-24S09R (NL/3KV)	18-36	9	222	80
27D-24S12R (NL/3KV)	18-36	12	167	80
27D-24S15R (NL/3KV)	18-36	15	133	80
27D-24S24R (NL/3KV)	18-36	24	84	80
27D-48S05R (NL/3KV)	36-72	5	400	70
27D-48S09R (NL/3KV)	36-72	9	222	80
27D-48S12R (NL/3KV)	36-72	12	167	80
27D-48S15R (NL/3KV)	36-72	15	133	80
27D-48S24R (NL/3KV)	36-72	24	84	80

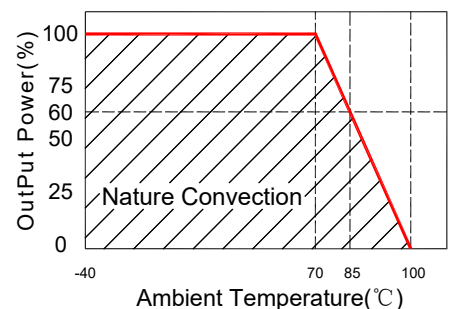
NOTE :

No suffix is standard isolation (1KVDC) e.g, 27D-12S05RNL,
*add suffix /3KV for 3KVDC isolation, e.g, 27D-12S05R3KV

Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Types	Vo, Io Nom			2:1	
Filter	Capacitor				

Temperature Derating Graph



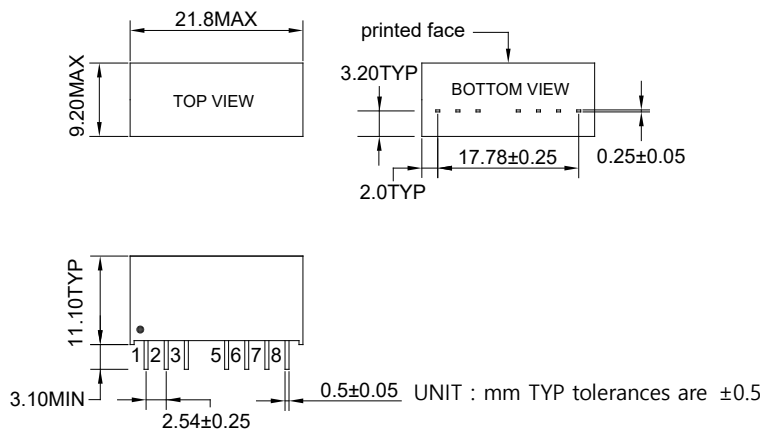
Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	100% full load			±3	%
Short Circuit Protection	Continuous				
Line Regulation	Regulated			±0.5	%
Load Regulation	Regulated			±0.8	%
Ripple & Noise	Output:5V-9V TYPES BW=DC To 20MHz			100	mVp-p
Ripple & Noise	Output:12-24V TYPES BW=DC To 20MHz			1% of Vout	mVp-p
Transient response setting time	50% load step change		350		us

General Specifications

Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Switching Frequency	Full load, nominal input		100		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

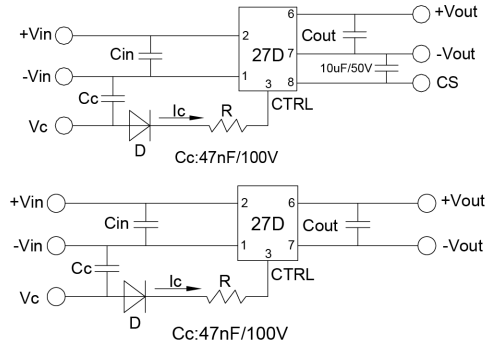
Markings and Dimensions



Part Number

27D - 05 S 05 R NL	27D - 05 S 05 R 3KV
A B C D E F	A B C D E F
A:Series	A:Series
B:Input Voltage	B:Input Voltage
C:Single(S)	C:Single Output
D:Output Voltage	D:Output Voltage
E:Regulated(R)	E:Regulated(R)
F:RoHS Version	F:Isolation Voltage

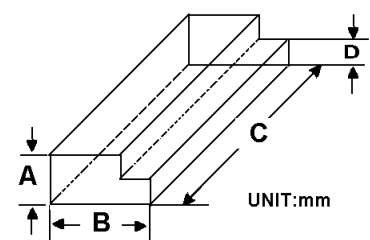
Recommended Test Circuit



5V:Cin 10uF,25V	5V:Cout 100uF/25V
12V:Cin 10uF,50V	9V:Cout 100uF/25V
24V:Cin 10uF,100V	12V:Cout 100uF/25V
48V:Cin 10uF,100V	15V:Cout 100uF/50V
	24V:Cout 100uF/50V

- When open or high impedance, the converter works well; when this pin is 'high', the converter shut down. It should be note that the input current should be between 5-10mA, exceeding the maximum 20mA will cause permanent damage to the converter.
- To make sure the product work at perfect operation status with full loading external capacitor is necessary and it is recommended to use high frequency low resistance electrolytic capacitor.

Packaging



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

PIN Connection

Pin	1	2	3	5	6	7	8
1KV	-Vin	+Vin	Ctrl-Control input can (can be left open)	NE-No external connection allowed	+Vout	-Vout	CS Optional External capacitor
3KV	-Vin	+Vin	Ctrl-Control input can (can be left open)	No Pin	+Vout	-Vout	NC

