



## 3000Vrms Single & Dual Output 2 Watt Dc-Dc Converter



### FEATURES:

- 24PIN DIL PACKAGE
- High Efficiency up to 70%
- Regulated Output Types
- Low Ripple And Noise
- Internal SMD Construction ● No External Component Required
- Operating Temperature:-40°C TO +85°C ● Industry Standard Pinout



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

PART NO.	OUTPUT VOLTAGE	OUTPUT CURRENT	Efficiency
	Vdc	mA	%TYP
45D-XXS05RNL	5	400	60
45D-XXS09RNL	9	222	60
45D-XXS12RNL	12	167	60
45D-XXS15RNL	15	133	60
45D-XXS24RNL	24	84	60
45D-XXD12RNL	± 12	± 84	60
45D-XXD15RNL	± 15	± 67	60
45D-XXD24RNL	± 24	± 42	60

Note:1."XX" Is Input Voltage :05=5Vdc,09=9Vdc,12=12Vdc,15=15Vdc,24=24Vdc,36=36Vdc,48=48Vdc.

2.The input voltage increases, there will be an increase in efficiency.

### Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	Vo, Io Nom			± 10	%
Filter	Capacitor				

### Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	100% full load			± 5	%
Short Circuit Protection	Continuous				
Short Circuit Restart	Automatic				
Line Regulation	Regulated			± 0.3	%
Load Regulation	Regulated			± 0.5	%
Ripple & Noise	BW=DC To 20MHz			50	mVp-p
Transient response setting time	50% load step change		350		us

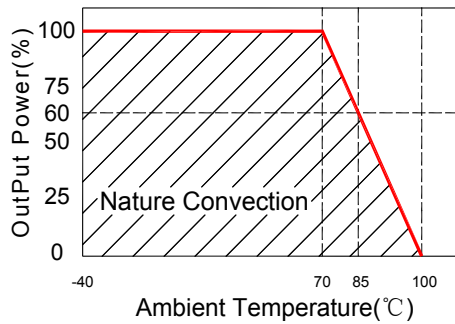
### General Specifications

Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Switching Frequency	Full load,nominal input		125		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			11.8		g
Dimensions		31.80x20.30x10.20			mm

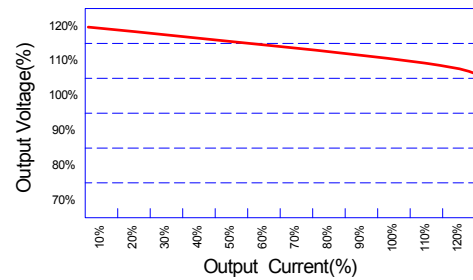


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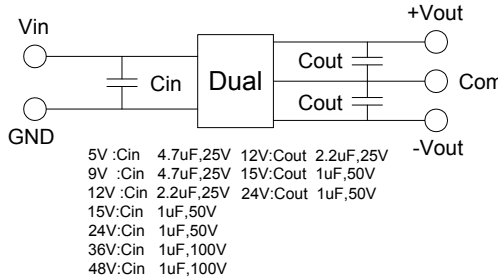
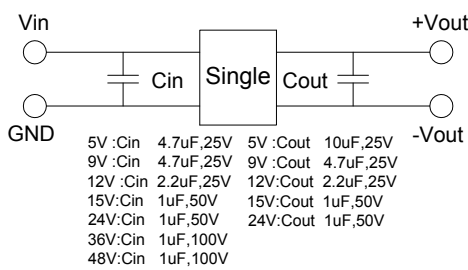
Temperature Derating Graph



Tolerance Envelope Graph



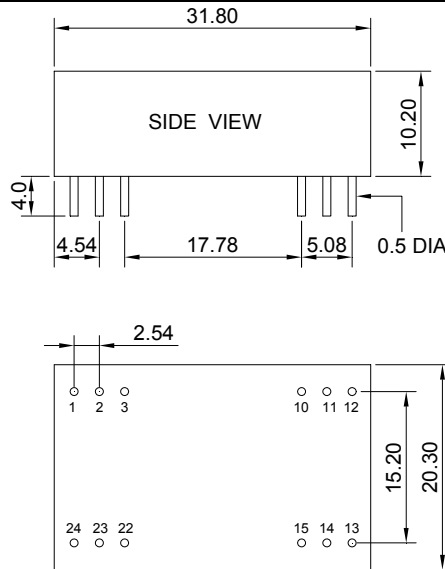
Recommended Test Circuit



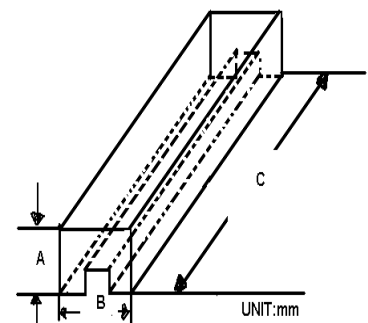
Part Number

45D - 05 S 05 R NL  
 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

Markings and dimensions



Packaging



SIZE(mm)		
A	B	C
18.71	23.00	522

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

PIN Connection

PIN	1.2.3	10.11	12	13	14	15	22.23.24
SINGLE	+Vin	NC	-Vout	+Vout	NC	NC	-Vin
DUAL	+Vin	COM	NC	-Vout	NC	+Vout	-Vin