

FEATURES :

- 60 Watt 2"X1" DIL Package
- 2:1Wide Input Voltage
- 100% Burned In
- High Efficiency To 91%
- Customized Solutions Available
- Remote Control:On/Off
- UL94V-0 Package Material
- Operating Temperature:-40°C TO +75°C(77°C With HS)
- 3 Years Warranty

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

Part Number	Input Voltage	Input Current		Output Voltage	Output Current	Efficiency	Capacitor Load
	Vdc	No Load (mA TYP)	Full Load (mA TYP)	Vdc	(mA)	%TYP	uF max.
93D-24S03R3NL	18-36	90	2213	3.3	14000	87	16500
93D-24S05R3NL	18-36	90	2841	5	12000	88	16500
93D-24S12R3NL	18-36	40	2809	12	5000	89	3300
93D-24S15R3NL	18-36	40	2809	15	4000	89	2200
93D-48S03R3NL	36-72	60	1094	3.3	14000	88	16500
93D-48S05R3NL	36-72	60	1404	5	12000	89	16500
93D-48S12R3NL	36-72	30	1389	12	5000	90	3300
93D-48S15R3NL	36-72	30	1374	15	4000	91	2200

Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Types				2:1	
Filter	Pi Network				
Protection	Fuse Recommended				

Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	Full load@Vin(nom.)			±2	%
Short Circuit/Restart Protection	Hiccup, automatic recovery				
Over Load Protection			150		%
Line Regulation				±0.5	%
Load Regulation	10% to 100% load			±0.5	%
Ripple & Noise	BW=DC To 20MHz			100	mVp-p
Transient response setting time	25% load step change		250		us
External Trim Adj. Range				±10	%

YUAN DEAN SCIENTIFIC



DC-DC Converter

93D-R3 SERIES

60Watt 1.6KV Isolated

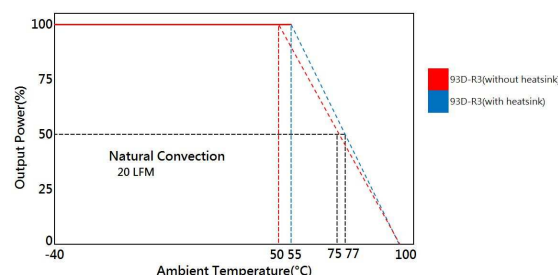
2 : 1 Input Voltage Range

Single Output

2" x 1"



Temperature Derating Graph



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General Specifications

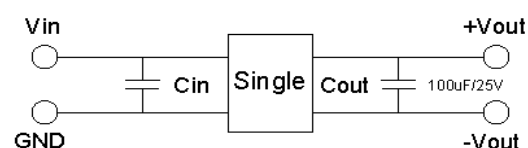
Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Switching Frequency			300		KHz
Operating Temperature	Without Heatsink	-40		75	°C
	With Heatsink	-40		77	
Humidity	Non Condensing	5		95	%
Cooling	Natural Convection (20LFM)				
Case material	Nickel Coated with Non-Conductive Base				
Weight		48.6/55.3			g
Dimensions	93D-R3 Model	50.8X25.4X13.1			mm
	93D-R3HS Model	50.8X25.4X17.8			
Potting Material	Silicone (UL94V-0 rated)				
Remote ON/OFF	ON	Open			
	OFF	Short to -Vin			
Isolation Voltage				1600	VDC
MTBF	MIL-HDBK-217F @25°C , Ground Benign	109600			Hours
Storage Temperature		-55		+125	°C
Case Temperature				+110	°C
Isolation Capacitance				2200	pF

Part Number

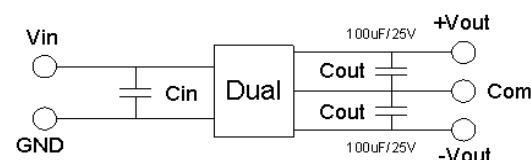
93D - 24 S 05 R 3 NL
A B C D E F G

A: Series
B: Input Voltage
C: Single Output(S),Dual(D)
D: Output Voltage
E: Regulated (R)
F: Package(3 or 3HS)
G: RoHs Version

Recommended Test Circuit



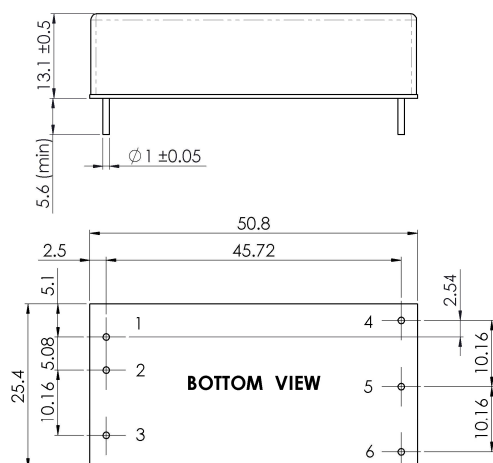
24V & 48V : Cin 10uF, 100V



24V & 48V : Cin 10uF, 100V

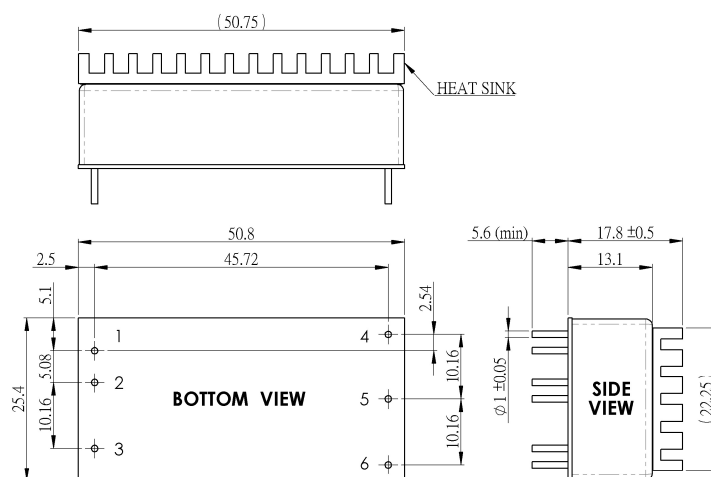
Dimensions

93D-R3 Outline



Unit : mm
Tolerance : XX.X ±0.5 , XX.XX ±0.25

93D-R3HS Outline



Unit : mm
Tolerance : XX.X ±0.5 , XX.XX ±0.25

PIN Assignment

Pin	1	2	3	4	5	6
Function	+Vin	-Vin	Remote On/Off	+Vout	-Vout	Trim

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