FEATURES :

- 3PIN SIP Package
- Pin-out compatible with LM78XX Linear regulators
- Wide Input Voltage Range 4.75~36VDC
- Efficiency up to 97%, Non isolated, no need for heatsink
- Regulated Output Types
- Short Circuit Protection
- Operating Temperature: -40℃ to +97℃
- UL94V-0 Package Material
- 100% Burned In
- 3 Years Warranty

YUAN DEAN SCIENTIFIC

DC-DC Converter

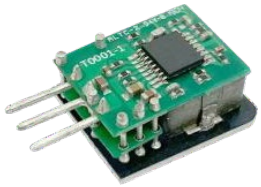
01D-3AF SERIES

7.5~45Watt

Non-Isolated

Single Output

0.59" x 0.37" x 0.72" Size



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

Selection Guide

Part Number	Input Voltage Range	Output Voltage	Output Current	Efficiency		Maximum capacitor Load
				Min. Vin	Max. Vin	
	Vdc	Vdc	mA (typ)	% (typ)	% (typ)	µF
01D-2R5-3AF	4.75-26	2.5	3000	93	84	3000
01D-3R3-3AF	4.75-26	3.3	3000	90	87	3000
01D-05-3AF	7-26	5	3000	95	90	3000
01D-12-3AF	15-36	12	3000	96	94	1800
01D-15-3AF	18-36	15	3000	97	94	1200

Part Number

01D	-	10	-	3A	F
A		B		C	D

A : Series
B : Output Voltage
C : Maximum Output Current
D : Open frame

TEL : 886-6-3842899 FAX : 886-6-3843288
E-MAIL: ydsweb@yds.com.tw

Rev: 1.2 2022/10/28

Input Specifications

Parameters	Conditions		Min	Typ	Max	Units
Input Voltage	See models table		4.75		36	Vdc
No Load Input Current	All models, Max. Vin			25	30	mA
Maximum Input Current	Mini. Vin, Full Load	01D-2R5-3AF			1698	mA
		01D-3R3-3AF			2316	
		01D-05-3AF			2256	
		01D-12-3AF			2500	
		01D-15-3AF			2577	
Start-up Time	100% Load	01D-2R5-3AF 01D-3R3-3AF 01D-05-3AF		10		ms
		01D-12-3AF 01D-15-3AF		14		
Input Filter	All Models			Internal Capacitor		

Output Specifications

Parameters	Conditions		Min	Typ	Max	Units
Voltage Tolerance	100% Load			±2		%
Line Regulation	Vin(min) to Vin(max) @100% Load		-0.2		+0.2	%
Load Regulation	0% Load to 100% Load		-0.8		+0.8	%
Minimum Load	not required					mA
Ripple & Noise (BW=20MHz)	Without Output Capacitor	01D-2R5-3AF, 01D-3R3-3AF			50	mVp-p
		01D-05-3AF			75	
		01D-12-3AF, 01D-15-3AF			150	
Transient Response Setting Time	50% Load Step Change (upper half)			150		us
Transient Response Deviation	50% Load Step Change (upper half)			250		%
Current Limit	% of Io, Hiccup mode, Auto-recovery		180			%
Short Circuit Protection	Continuous [Hiccup Mode], Auto-Recovery					
Temperature Coefficient			-0.02		+0.02	%/℃

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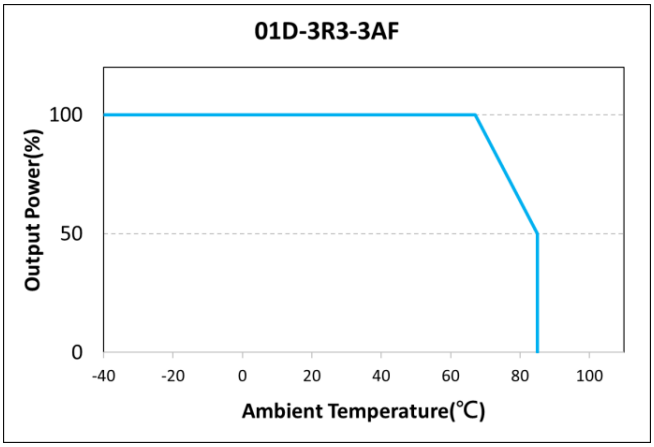
General Specifications

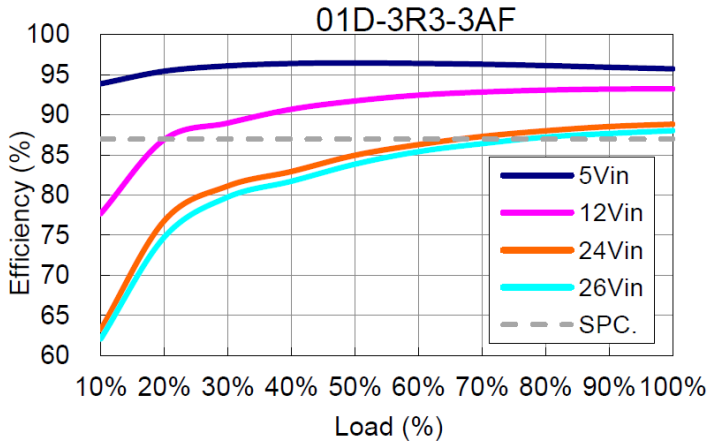
Parameters	Conditions		Min	Typ	Max	Units
Switching Frequency	100% Load, Nominal Input			310		KHz
Operating Ambient Temperature (Power Derating See Derating Graph)	Max. Vin, 100% Load	01D-2R5-3AF	-40		72.1	℃
		01D-3R3-3AF			71.0	
		01D-05-3AF			66.7	
		01D-12-3AF			52.1	
		01D-15-3AF			38.9	
Thermal Impedance	20LFM			None		℃/W
	100LFM			None		
	200LFM			None		
	400LFM			None		
Maximum Case Temperature				None		℃
Storage Temperature			-55		125	℃
Relative Humidity	Non Condensing		5%		95%	RH
Cooling	Natural Convection					
Thermal Shock	MIL-STD-810F					
Shock &Vibration Test	MIL-STD-810F					
Case Material	Open frame					
Potting Material	None					
MTBF	MIL-HDBK-217F@25℃ (calculated)			$5.16x10^6$		Hours
Weight				10		g
Dimensions	14.9 x 9.5 x 18.4					mm

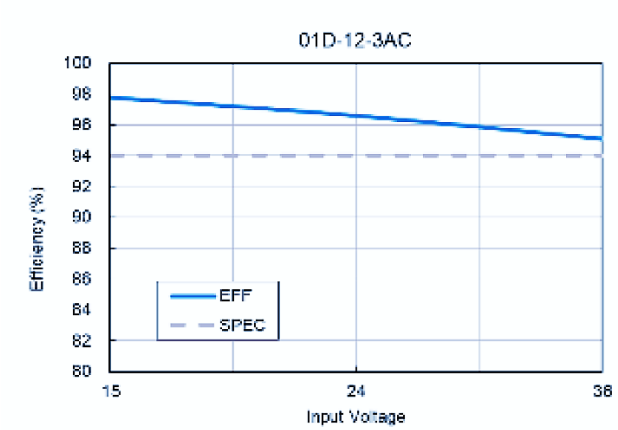
Temperature Derating Graph



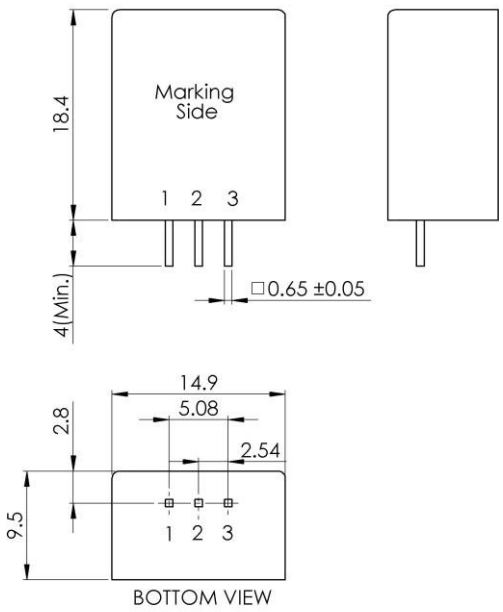
01D-3R-3AF (@Max. Vin)

Characteristic Curve





Dimensions



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

PIN Assignment

Pin	Define	Diameter
1	+Vin	0.65mm[0.026"]
2	GND	0.65mm[0.026"]
3	+Vout	0.65mm[0.026"]