

FEATURES:

- 3PIN SIP package
- Pin-out compatible with K78XX Linear
- Efficiency up to 93%, Non isolated, no need for heatsinks
- Customized solutions available
- UL94V-0 package material
- Operating temperature from -40°C to +85°C
- Short circuit protection
- No-load input current as low as 1.5mA
- UL/cUL/IEC/EN 62368-1 approved, CB-Report
- EMC Standard of EMI EN55032:2015 Approved
- EMC Standard of EMS EN55035:2017 Approved

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

Part Number	Input Range	Output Voltage	Output Current	Efficiency (%)		Capacitive Load
	Vdc	Vdc	mA	Min.Vin	Max.Vin	μF max
08DC-3R3-500(L)	9-90	3.3	500	82	69	100
	9-70	-3.3	-300	76	70	100
08DC-05-500(L)	9-90	5.0	500	87	75	100
	9-70	-5.0	-300	78	76	100
08DC-6R5-500(L)	9-90	6.5	500	91	78	100
08DC-09-500(L)	14-90	9.0	500	91	80	100
08DC-12-500(L)	18-90	12	500	91	83	100
	9-62	-12	-300	83	84	100
08DC-15-500(L)	20-90	15	500	93	84	100
	12-62	-15	-300	85	85	100
08DC-24-300(L)	36-90	24	300	93	85	100

Note: (L) Add a suffix to bend the feet 90° , e.g, 08DC-05-500L

Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	3.3V output		3	±4	%
	Others			3	%
Short Circuit Protection	Continuous, automatic recovery				
Line Regulation	3.3V to 6.5V			1.5	%
	9V to 24V			2.5	%
Load Regulation	(10% To 100% F.L)			2.0	%
Ripple & Noise (without Output Capacitor)	BW=DC To 20MHz			80	mVp-p
Transient response setting time	50% load step change		250		us

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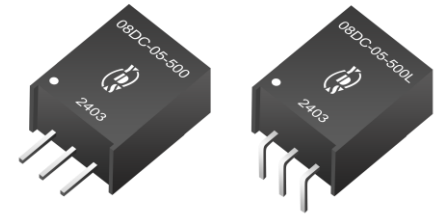
DC-DC Converter

08DC-500 SERIES

Non-Isolated

Single Output

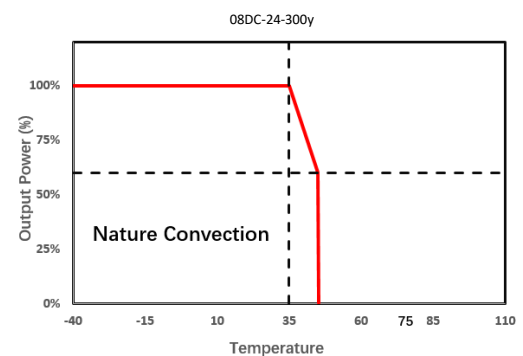
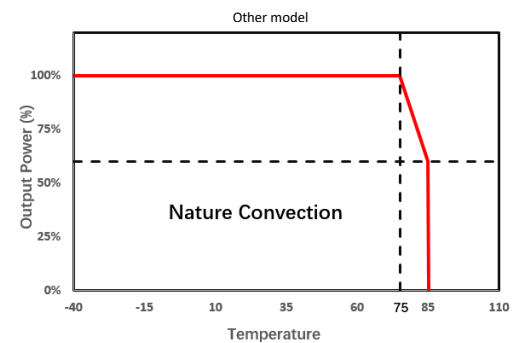
0.45" * 0.3" * 0.68"

CB
Scheme

CE

C_{UL}US
FROHS
COMPLIANT3
YEARS
WARRANTY

Temperature Derating Graph



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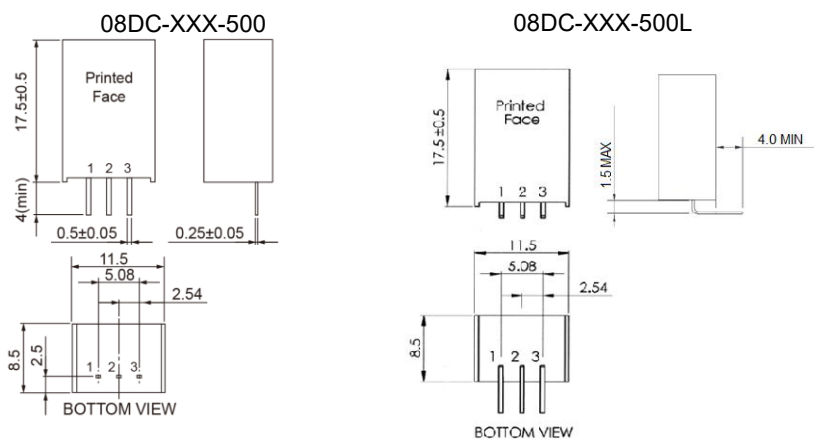
Electromagnetic Compatibility (EMC)

EMI	CE	CISPR32/EN55032 CLASS B (see Fig. 1 for recommended circuit)		
	RE	CISPR32/EN55032 CLASS B (see Fig. 1 for recommended circuit)		
EMS	ESD	IEC/EN61000-4-2	Contact $\pm 4\text{kV}$	perf. Criteria B
	RS	IEC/EN 61000-4-3	10V/m	perf. Criteria B
	EFT	IEC/EN 61000-4-4	100KHz $\pm 1\text{kV}$	perf. Criteria B
	Surge	IEC/EN 61000-4-5 line to line $\pm 1\text{kV}$ perf. Criteria B		
	CS	IEC/EN 61000-4-6	3Vr.m.s	perf. Criteria B

General Specifications

Parameters	Conditions	Min	Typ	Max	Units
Switching Frequency			440		KHz
Operating Temperature		-40		85	$^{\circ}\text{C}$
Storage Temperature		-55		125	$^{\circ}\text{C}$
Humidity	Non-Condensing			95	%
Cooling	Free air Convection (20LFM)				
Case material	Non-Conductive Black Plastic				
Weight			4.0		g
Dimensions	08DC-XXX-500	11.5x8.5x17.5			mm
	08DC-XXX-500L	11.5x8.5x19			mm
MTBF(+25 $^{\circ}\text{C}$)	using MIL-HDBK 217F	5000x10 ³			hours
MTBF(+71 $^{\circ}\text{C}$)	using MIL-HDBK 217F	1000x10 ³			hours

Markings and Dimensions

Unit:mm Tolerance:XX.X $\pm$ 0.5, XX.XX $\pm$ 0.25

PIN Connection

PIN	1	2	3
Function	+Vin	GND	+Vout
	+Vin	-Vout	GND

Part Number

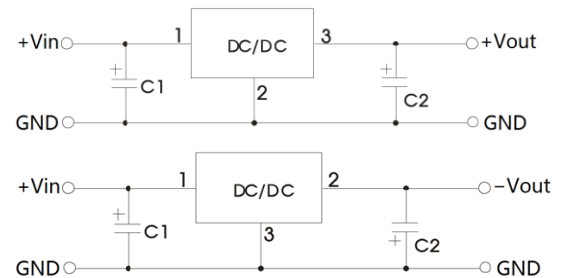
08DC - 05 - 500
A B C

A : Series

B : Output Voltage

C : Output Current

Recommended Test Circuit



Vout	C1	C2
3.3	10 μF /100V	22 μF /10V
5		22 μF /10V
6.5		22 μF /16V
9		22 μF /16V
12		22 μF /25V
15		22 μF /25V
24		10 μF /50V

EMC (CLASS B) Compliance Circuit

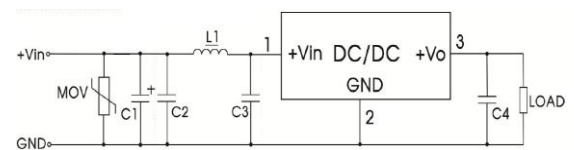
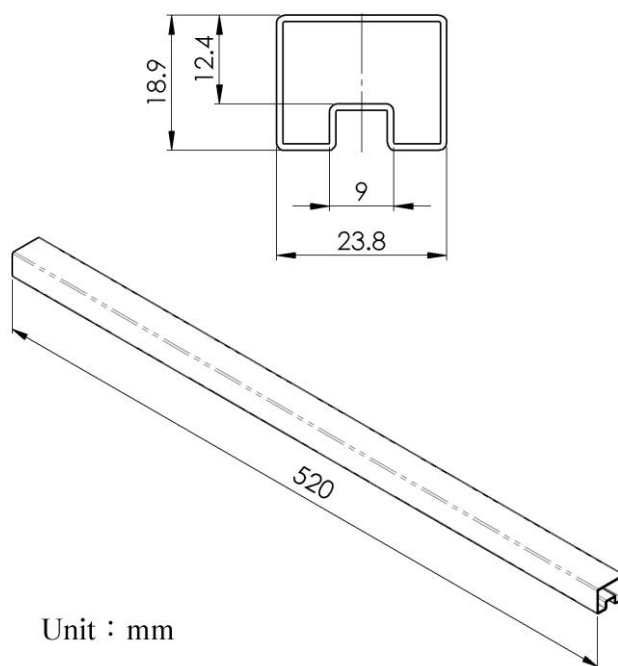


Fig.1

FUSE	Select fuse value according to actual input current
MOV	S20K30
L1	120 μH
C1	680 μF /100V
C2,C3	4.7 μF /100V
C4	10 μF /50V

Packing Formation



Unit : mm

Weight	: 4.0 grams/pcs
Tube	: 42 pcs