AMX75 series

75W DC to DC Converter

Features

- 2:1 Wide Input Range Voltage
- Regulated Output
- 1500VDC Isolation
- Potting Material : Epoxy (Flammability to UL94V-0)
- Pin Material : Brass, Solder Coated
- Remote On/Off Control
- Case Material: Copper Plated with Nickel
- Over Voltage Protection
- Short Circuit Protection : Automatics recovery
- 3 year warranty

Electrical Characteristics:

Vin	Input Voltage for AMB75		9~18VDC
	Input Voltage for AMC75		18~36VDC
	Input Voltage for AMD75		36~72VDC
Fs	Switching Frequency		230kHz (typ.)
Po	Output Power Range		75W
Vo	Output Voltage Range		See rating chart
Io	Output Current Range		See rating chart
Acc	Output Voltage Accuracy	Io=Full load, Vin=Typ., at 25°C	2.0% (max.)
Eff	Efficiency	Io=Full load, Vin=Typ., at 25°C	88~91%
REG-i	Line Regulation	Io=Full load, Vin=max to min, at 25°C	0.5% (max.)
REG-o	Load Regulation	Io=10% to 100%, Vin=Typ., at 25°C	0.5% (max.)
Vp-p	Ripple & Noise (Peak to Peak)	20MHz	1.0% (max.)
Vio	Isolation Voltage	Input to Output	1500VDC (min.)
Ris	Isolation Resistance	Input to Output	1000MΩ (min.)
Cis	Isolation Capacitance	Input to Output	1000pF (max.)
TC	Temperature Coefficient	All output	0.02%/°C (max.)
Br	Balance Regulation	Io=Full load, Vin=Typ.	2.0% (max.)
Trp	Time of Transient Response	Vin=Typ., 25% load step change	500µS (max.)
Ts	Start Up Time	Vin=Typ., Io=Full load	0.1~2S
OCP	Over Current Protection	Vin=min to max	110~150%Io

Environmental

To	Operating Temperature	With derating	-40~75°C
Tcase	Maximum Case Temperature		100°C (max.)
Ts	Storage Temperature		-55~105°C
Hr	Relative Humidity		0~95%
MTBF	Operating Temperature at 25°C，Calculated per MIL-HDBK-217F		1M Hrs (typ.)
Cool	The Cooling Condition is Free		
Filter	Pi-Network		

Application:

- Automatic Control System
- Industry Control System
- Medical System
- Distributed Power Achitectures

Safety Approvals:

RoHS
2002/95/EC
COMPLIANT

External Functions Specifications :

Remote Control Function ---Enable High							
Sym.	**Parameter**	**Test Conditions**	**Min.**	**Typ.**	**Max.**	**Unit**
Sd	System Disable	V-Remote	-0.5		0.8	V
		I-Remote			-600	μA
Se	System Enable	V-Remote	2.5		Vin-max	V
		I-Remote			-500	μA
		Floating Remote ON/OFF Pin				

Note : Control Voltage Reference to Negative Input

Output Voltage And Current Rating Chart :

Model Number	Intput Voltage	Output Voltage	Output Current	Efficiency
AMB75-102	9~18VDC (Nominal:12V)	5VDC	15.00A	88%
AMB75-105		12VDC	6.25A	89%
AMB75-106		15VDC	5.00A	89%
AMB75-108		24VDC	3.12A	89%
AMC75-102	18~36VDC (Nominal:24V)	5VDC	15.00A	90%
AMC75-105		12VDC	6.25A	91%
AMC75-106		15VDC	5.00A	91%
AMC75-108		24VDC	3.12A	91%
AMD75-102	36~72VDC (Nominal:48V)	5VDC	15.00A	90%
AMD75-105		12VDC	6.25A	91%
AMD75-106		15VDC	5.00A	91%
AMD75-108		24VDC	3.12A	91%

Note :
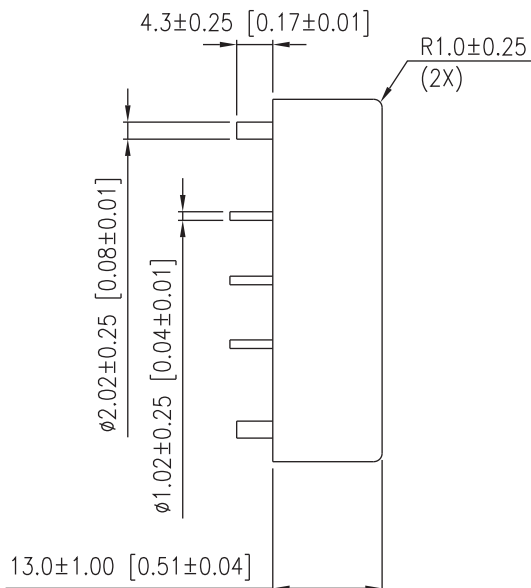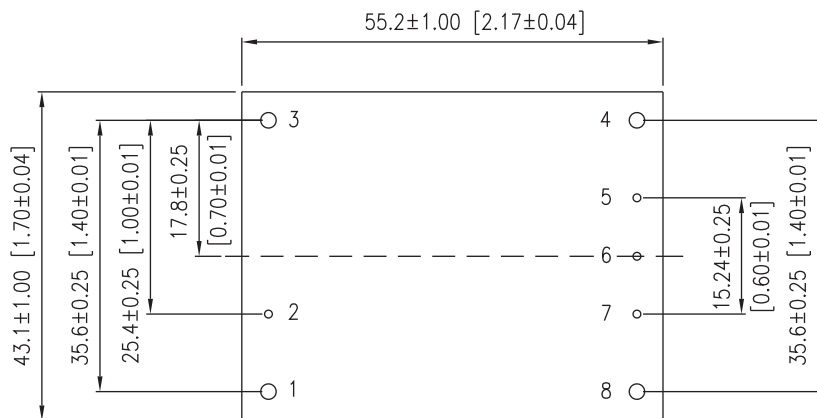(1) All specifications are measured at nominal input voltage, constant resistive load between Min. and Max. output current, Ta = +25℃.
(2) When Load is lower than Min. output current or under no-load, it will not damage the devices; however, it may not meets all specifications.
(3) Output Ripple & Noise Test please refers to Sinpro Electronics Co., Ltd. proposed test-method.
(4) Load Regulation and Line Regulation calculating please refers to Sinpro Electronics Co., Ltd. proposed formula.
(5) An external fuse is needed at the front end of DC/DC converters for protection and base on surge current and maximum input current when settle it in recommended.
(6) Ripple & Noise measurement bandwidth Should be under 20MHz, with a 0.47uF MLCC.
(7) That natural convection "Is about 0.25m/s but is not equal to still air".

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Derating Curve :
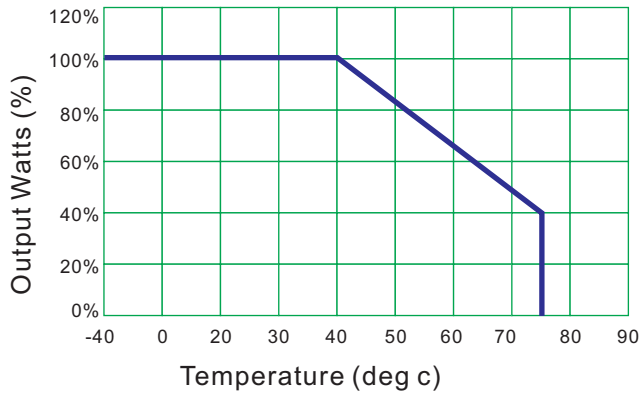
1. Operating Temperature: -40 to 75°C
2. Derate linearly from 100% load at 40°C to 40% load at 75°C

Mechanical Specifications :

55.2±1.00 [2.17±0.04]

43.1±1.00 [1.70±0.04]
35.6±0.25 [1.40±0.01]
25.4±0.25 [1.00±0.01]
17.8±0.25 [0.70±0.01]

15.24±0.25 [0.60±0.01]
35.6±0.25 [1.40±0.01]

4.3±0.25 [0.17±0.01]
R1.0±0.25 (2X)

⌀2.02±0.25 [0.08±0.01]
⌀1.02±0.25 [0.04±0.01]

13.0±1.00 [0.51±0.04]

Pin Connections :

Pin	Single
1	+Vin
2	Remote on/off
3	-Vin
4	-Vout
5	-Sense
6	Trim
7	+Sense
8	+Vout

Note:
1. Dimensions are shown in mm.
2. Weight: 72gs.

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Recommended Pin Patterns
Bottom View (2.54mm / 0.1inch grids)
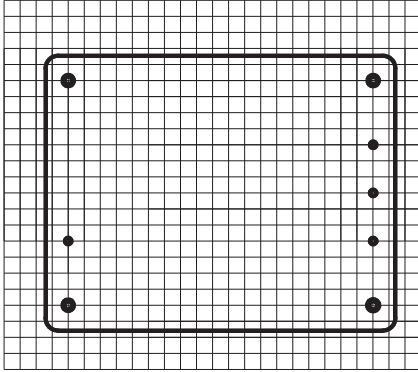
Tolerance	Millimeters	Inches
	X ±0.25	.XX ±0.01
	XX.XX ±0.25	.XXX ±0.01
Pin	±0.05	±0.002