AMX15 series

15W DC to DC Converter

Features

- 2:1 & 4:1 Wide Input Range Voltage
- Regulated Output
- Single or Dual Output
- 1500VDC Isolation
- Potting Material : Epoxy(Flammability to UL94V-0)
- Pin Material : Brass, Solder Coated
- Remote On/Off Control
- Case Material: Nickel-Coated Copper with Non-Conductive Base
- Over Voltage Protection(clamp)
- Short Circuit Protection : Automatics recovery
- 1 year warranty

Electrical Characteristics

Vin	**Input Voltage for AMB15**			9~18VDC
	Input Voltage for AMC15			18~36VDC
	Input Voltage for AMD15			36~75VDC
	Input Voltage for AMF15			9~36VDC
	Input Voltage for AMG15			18~75VDC
Fs	**Switching Frequency**			200kHz (typ.)
Po	**Output Power Range**			15W
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% (typ.)
Eff	**Efficiency**	Io=Full load, Vin=Typ., at 25°C		71~85%
REG-i	**Line Regulation**	Io=Full load, Vin=Vmax to Vmin, at 25°C		0.5% (max.)
REG-o	**Load Regulation**	Io=20% to 100%, Vin=Typ., at 25°C	Single Output	0.5% (max.)
			Dual Output	2.0% (max.)
OCP	**Over Current Protection**	Io=Full load, Vin=Typ., at 25°C		110~160%
Trp	**Time of Transient Response**	Load of 75% to 100%		300μS (max.)
Vp-p	**Ripple & Noise(Peak to Peak)**	Io=Full load, Vin=Typ., at 25°C		1% (typ.)
TC	**Temperature Coefficient**	All output		±0.05%/°C

Note: The Ripple & Noise which is 5VDC & 3.3VDC are 80mV(max).
All specifications are measured at typical input, full load and 25°C unless otherwise noted.

Environmental

To	**Operating Temperature**	Without derating	-40~75°C
	Maximum Case Temperature		95°C (max.)
Ts	**Storage Temperature**		-55~115°C
Hr	**Relative Humidity**		0~95%
MTBF	**Operating Temperature at 25°C , Calculated per MIL-HDBK-217F**		0.7M Hrs (min.)
Cool	**The Cooling Condition is Free**		
Filter	**Internal Capacitor**		

Safety Specification

Vio	**Dielectric With Standing Voltage for input to output**	Input to output	1500VDC (min.)
Vioc	**Dielectric With Standing Voltage for input or output to case**	Input or output to case	1500VDC (min.)
Ris	**Isolation Resistance**		1000M (min.)
EP	**Potting Material is Epoxy which is flammability to UL94V-0**		
CISPER	**EMI requirements for CISPER-22**	Io-Full load, Vin=Typ., At 25°C	A CLASS
FCC	**EMI requirements for FCC PART-15**	Io-Full load, Vin=Typ., At 25°C	A CLASS

Note: For meeting CISPER and FCC, some filters must be added. (Please refer Emissions Solution)

Application:

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

Safety Approvals:

CE FC RoHS 2002/95/EC COMPLIANT

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Selection Chart :

Model Number	Output Voltage	Output Voltage	Output Current	Efficiency
AMB15-101	9~18VDC (Nominal:12V)	3.3VDC	4.00A	74%
AMB15-102		5VDC	3.00A	78%
AMB15-105		12VDC	1.25A	82%
AMB15-106		15VDC	1.00A	83%
AMB15-202		±5VDC	1.50A	78%
AMB15-205		±12VDC	0.625A	82%
AMB15-206		±15VDC	0.50A	81%
AMC15-101	18~36VDC (Nominal:24V)	3.3VDC	4.00A	75%
AMC15-102		5VDC	3.00A	82%
AMC15-105		12VDC	1.25A	84%
AMC15-106		15VDC	1.00A	83%
AMC15-202		±5VDC	1.50A	80%
AMC15-205		±12VDC	0.625A	80%
AMC15-206		±15VDC	0.50A	84%
AMD15-101	36~75VDC (Nominal:48V)	3.3VDC	4.00A	75%
AMD15-102		5VDC	3.00A	76%
AMD15-105		12VDC	1.25A	85%
AMD15-106		15VDC	1.00A	85%
AMD15-202		±5VDC	1.50A	76%
AMD15-205		±12VDC	0.625A	83%
AMD15-206		±15VDC	0.50A	85%
AMF15-101	9~36VDC (Nominal:24V)	3.3VDC	4.00A	74%
AMF15-102		5VDC	3.00A	78%
AMF15-105		12VDC	1.25A	80%
AMF15-106		15VDC	1.00A	83%
AMF15-202		±5VDC	1.50A	79%
AMF15-205		±12VDC	0.625A	83%
AMF15-206		±15VDC	0.50A	83%
AMG15-101	18~75VDC (Nominal:48V)	3.3VDC	4.00A	76%
AMG15-102		5VDC	3.00A	75%
AMG15-105		12VDC	1.25A	79%
AMG15-106		15VDC	1.00A	83%
AMG15-202		±5VDC	1.50A	79%
AMG15-205		±12VDC	0.625A	80%
AMG15-206		±15VDC	0.50A	83%

* The typical efficiency is measured at nominal input, 25°C and at the module terminals.

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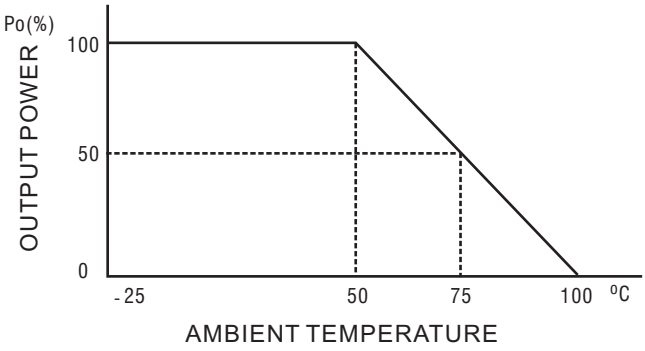
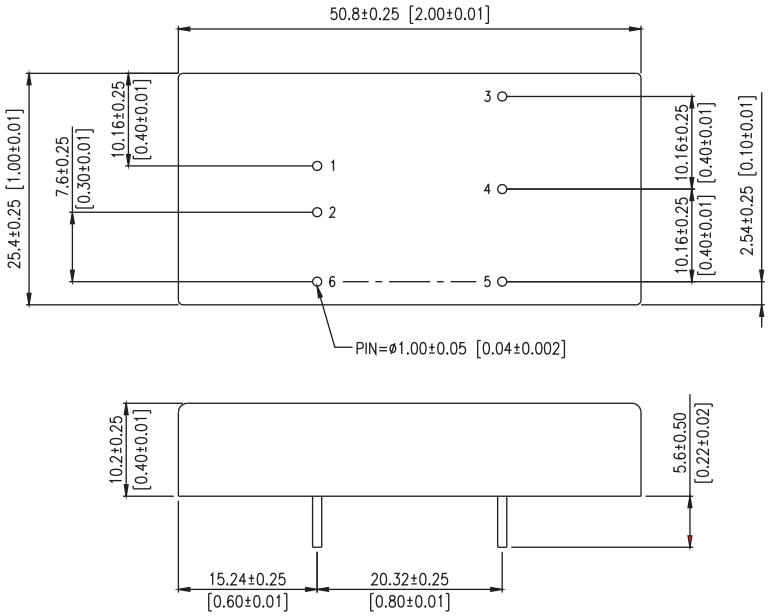
Derating Curve :



Note: At nominal input, Full load and cooling is natural convection.

Mechanical Specifications :

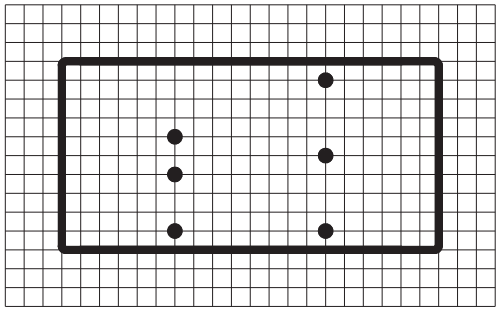


Pin Connections :

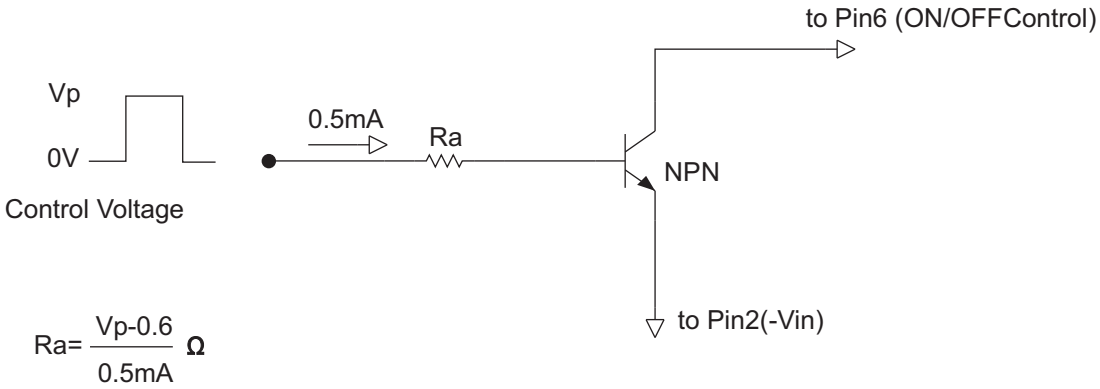
Pin	Single	Dual
1	+Vin	+Vin
2	- Vin	- Vin
3	+Vout	+Vout
4	No Pin	Common
5	-Vout	-Vout
6	Remote control On / Off Control	

Note:
1. Dimensions are shown in mm.
2. Weight: 33gs.

Recommended Pin Patterns
Bottom View (2.54mm / 0.1inch grids)

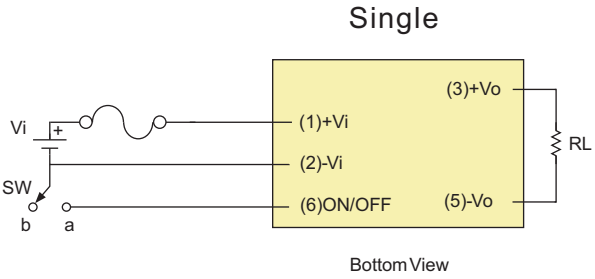


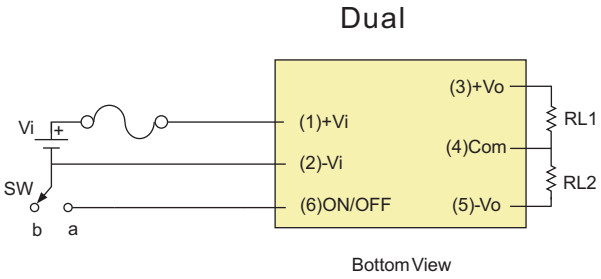
Tolerance	Millimeters	Inches
	X ±0.25	.XX ±0.01
	XX.XX ±0.25	.XXX ±0.01
Pin	±0.05	±0.002



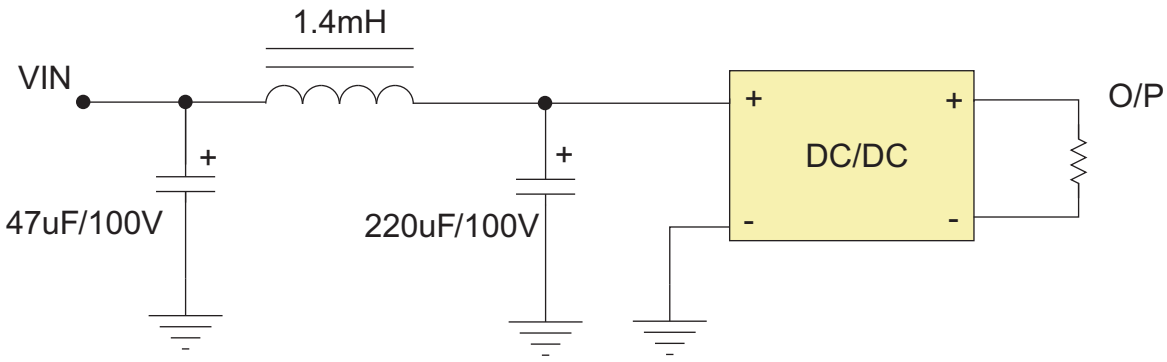
$$Ra = \frac{Vp-0.6}{0.5mA}\ \Omega$$

Note：The control voltage is referenced to negative input (-Vin)





Emissions Solution : Conducted / ESD / RS / EFT / SURGE / CS / PFMF



Note: This graph meet EN 55022:2006+A1:2007 Class A