

# AMX45 SERIES

## 45W DC to DC Converter Module

### Description:

This series of DC to DC Converter module provide 45 Watts of continuous output power. They are suited for use in Data communication, Telecommunication or other Industry equipment.



### Features:

- 2:1 Wide Input Range Voltage
- Regulated Output
- Size: 55.2W x 43.1L x 13Hmm
- 1500VDC Isolation
- Potting Material : Epoxy( Flammability to UL94V-0 )
- Pin Material : Brass, Solder Coated
- Remote On/Off Control
- Output Voltage Trimming
- Over Voltage Protection (Clamp)
- Case Material: Copper Plated with Nickel
- Short Circuit Protection : Automatics recovery
- 2 year warranty

### Safety Approvals:



### Electrical Characteristics:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Vin	Input Voltage for AMC45		18	24	36	VDC
	Input Voltage for AMD45		36	48	72	VDC
Fs	Switching Frequency			300		kHz
Po	Output Power Range		0		45	W
Vo	Output Voltage Range		See Rating Chart			V
Io	Output Current Range		See Rating Chart			A
Acc	Output Voltage Accuracy			±2.0		%
Eff	Efficiency	Io=Full load, Vin=Typ., at 25°C		82	85	%
REG-i	Line Regulation	Io=Full load, Vin=Vmax to Vmin, at 25°C			±0.5	%
REG-o	Load Regulation	No load to full load, Vin=Typ., At 25°C			±0.5	%
OCP	Over Current Protection	Io=Full load, Vin=Typ., at 25°C	110		150	%
Trp	Time of Transient Response	Load of 50% to 100%			500	µS
Vp-p	Ripple & Noise (Peak to Peak)	Io=Full load, Vin=Typ., at 25°C		1		%
TC	Temperature Coefficient	Io=Full load, Vin=Typ., at 25°C	-0.05		+0.05	%/°C

Note: The Ripple & Noise of 5VDC is 80mV(max).

All specifications are measured at typical input, full load and 25°C unless otherwise noted.

### Environmental:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Toper	Operating Temperature Range	Without derating	-40	25	75	°C
Tcase	Maximum Case Temperature				100	°C
Tstg	Storage Temperature		-55		105	°C
Hr	Relative Humidity		0		95	%
MTBF	Operating Temperature at 25°C, Calculated per MIL-HDBK-217F		0.6M			Hrs
Cool	The Cooling Condition is Free					
Filter	Input Filter is Pi Type					

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### Safety Specification :

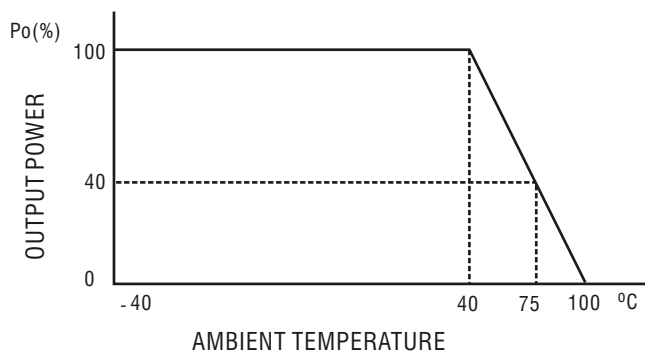
Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Vio	Dielectric With Standing Voltage for input to output.	Input to output	1500			VDC
Vioc	Dielectric With Standing Voltage for input or output to case.	Input or output to case	1500			VDC
Ris	Isolation Resistance	Test Voltage=500VDC	1000			MΩ
EP	Potting 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)

### Selection Chart :

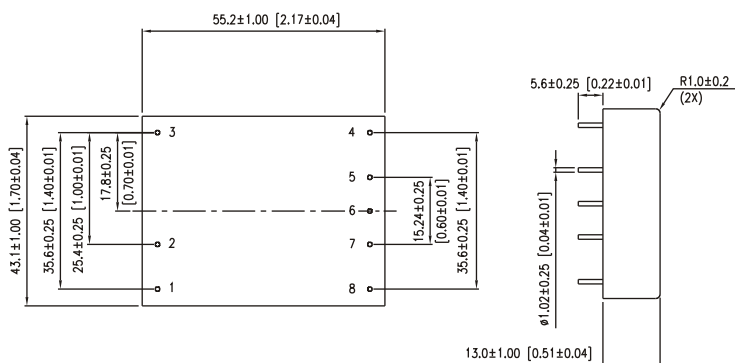
Model Number	Input Voltage	Output Voltage	Output Current	Efficiency
AMC45-102	18~36VDC (Nominal: 24V)	5VDC	8.00A	80%
AMC45-105		12VDC	3.75A	82%
AMC45-106		15VDC	3.00A	84%
AMD45-102	36~72VDC (Nominal: 48V)	5VDC	8.00A	80%
AMD45-105		12VDC	3.75A	84%
AMD45-106		15VDC	3.00A	85%

### Derating Curve :



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

### Mechanical Specifications :



### Pin Connections:

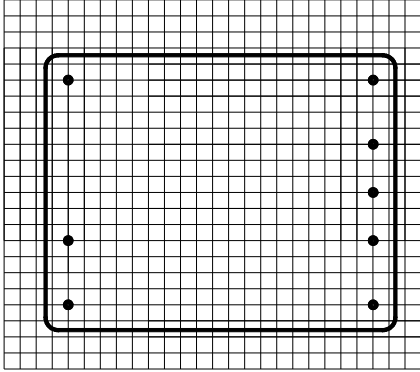
Pin	Single
1	+Vin
2	Remote on/off
3	-Vin
4	-Vout
5	-Sense
6	Trim
7	+Sense
8	+Vout

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

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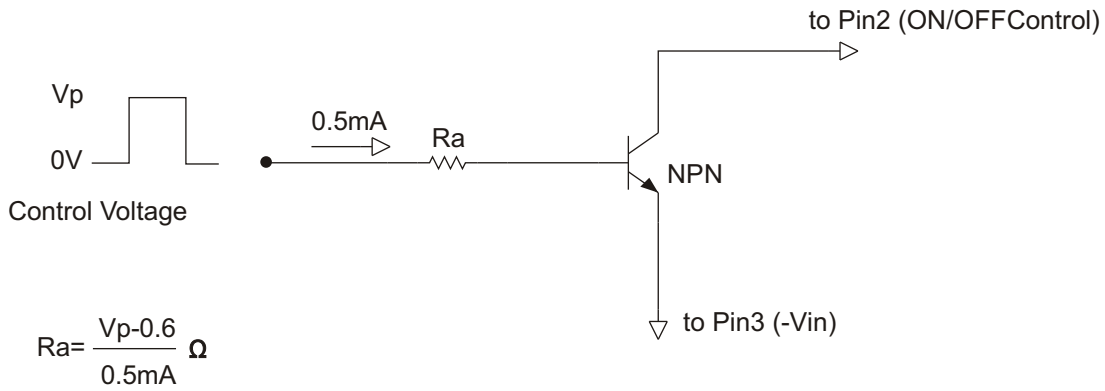
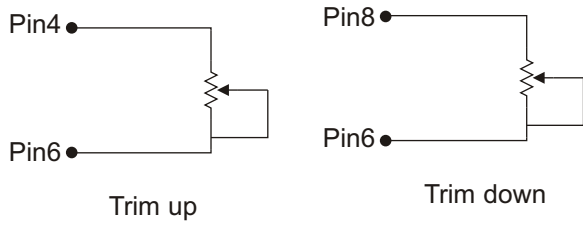
## 45W DC to DC Converter Module

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



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

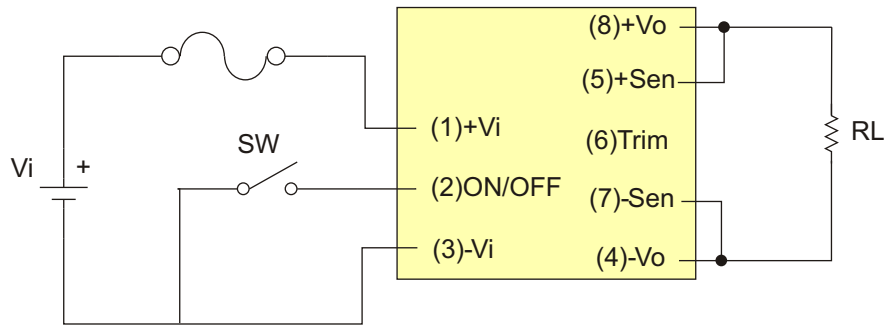
Single



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

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Bottom View

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

