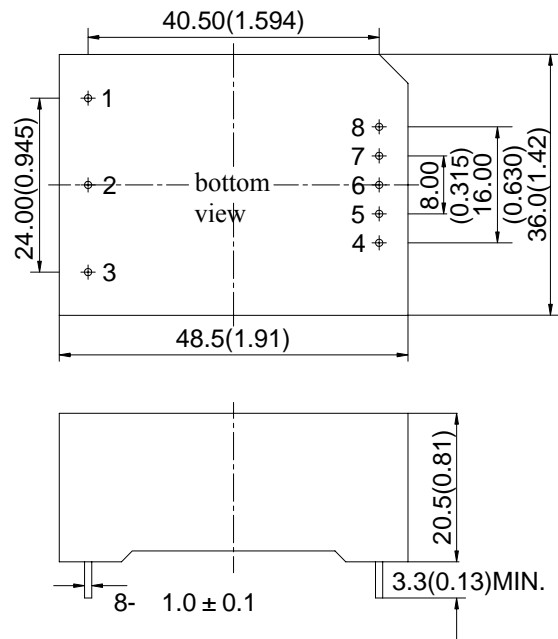


YA3 Series Modules

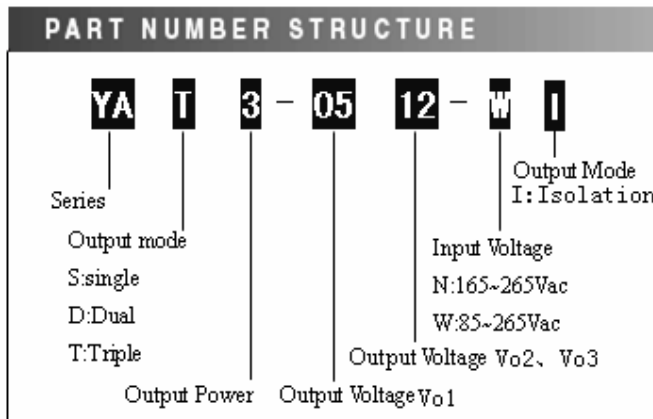


Outline Diagram



Features

- Industry Size (48.5mm × 36.0mm × 20.5mm)
- Universal Input Voltage
- 2500V_{ac} Isolation Voltage
- 60kHz Switching Frequency
- Short Circuit Protection , Auto Recovery
- 100% Burn-in
- 2-year warranty



Pin	single	dual (balanced load)	dual (unbalanced load)	triple
1	L	L	L	L
2	N	N	N	N
3	FG	FG	FG	FG
4	-Vo	-Vo	-Vo1	-Vo1
5	NP	NP	+Vo1	+Vo1
6	NP	COM	NC	Vo3
7	NP	NP	-Vo2	COM
8	+Vo	+Vo	+Vo2	Vo2

Case material: Black plastic, UL94V-0.
 Pins material: Copper, tin-cerium plating
 Notes: All dimensions in mm (inches)
 Tolerances: X.X±0.5 (X.XX±0.02)
 X.XX±0.25mm (X.XXX±0.010)

Performance Specifications And Ordering Guide

Unless otherwise specified, all values are given at: 25 °C, one standard atmosphere pressure, pure resistive load and basic connection.

Model	Output				Input	Efficiency
	Voltage(V)	Current(A)	Ripple and Noise (mV)	Capacitive load(μF)	Range-AC (Volts)	
single						
YAS3-5-N	5.05	0.6	50	2200	165-265	73%
YAS3-12-N	12	0.25	100	1000	165-265	73%
YAS3-15-N	15	0.2	100	1000	165-265	73%
YAS3-24-N	24	0.12	100	470	165-265	75%

AC-DC Power Module YA3 Series

Continue

Model	Output				Input	Efficiency
	Voltage(V)	Current(A)	Ripple and Noise (mV)	Capacitive load(μF)	Range-AC (Volts)	
YAS3-48-N	48	0.063	200	220	165-265	75%
YAS3-5-W	5.05	0.6	50	2200	85-265	73%
YAS3-15-W	15	0.2	100	1000	85-265	73%
YAS3-24-W	24	0.12	150	470	85-265	75%
YAS3-48-W	48	0.06	200	220	85-265	75%
dual						
YAD3-5-N	+5.05/-5.05	+0.3/-0.3	50/50	2200/2200	165-265	72%
YAD3-12-N	+12/-12	+0.125/-0.125	100/100	470/470	165-265	73%
YAD3-0505-NI	5/5	0.5/0.1	50/50	2200/1000	165-265	60%
YAD3-0512-NI	5/12	0.36/0.1	50/100	1000/220	165-265	70%
YAD3-0524-NI	5/24	0.25/0.06	50/100	2200/220	165-265	71%
YAD3-5-W	+5.05/-5.05	+0.3/-0.3	50/50	2200/2200	85-265	72%
YAD3-15-W	+15/-15	+0.1/-0.1	100/100	1000/1000	85-265	73%
YAD3-24-W	+24/-24	+0.06/-0.06	200/200	220/220	85-265	74%
YAD3-0505-WI	5/5	0.5/0.1	50/50	2200/1000	85-265	70%
YAD3-0512-WI	5/12	0.36/0.1	50/100	1000/220	85-265	71%
triple						
YAT3-0512-WI	5/+12/-12	0.36/+0.05/-0.05	50/100/100	1000/220/220	85-265	70%

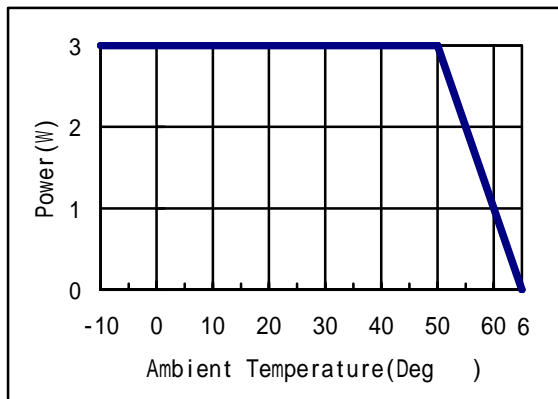
Performance/Functional Specifications

Input			
Input Voltage:	AC:85~265 AC:165~265	DC:100~375 DC:200~375	suffix -W suffix -N
Input Frequency:	45~65Hz		
Output			
Voltage Accuracy:	±1% ±3%	Vo1 Vo2、Vo3	
Line Regulation:	±0.2%max.		
Load Regulation:	±0.5% max.		
Ripple and Noise:	50mVp-p 100 mVp-p 200 mVp-p	Vo≤5Vdc Other Vo≥48Vdc	
Efficiency:	See Ordering Guide		
Transient Response Recovery Time(μs):	see respective data sheet		
Transient Response Voltage Deviation (%):	see respective data sheet		
Start-up Delay Time:	see respective data sheet		
Rise Time:	see respective data sheet		

General	
Isolation Voltage:	2500Vac 1min/5mA (Input-Output)
Switching Frequency:	60kHz(typ.)
MTBF :	3×10 ⁵ h (Bellcore RT332, 25)
Temperature Coefficient:	±0.1% per (Max)
Case Temperature:	-10 ~ +70 (Commercial)
Storage Temperature:	-40 ~ +105
Relative Humidity:	10%~90%
Short-circuit Protection:	Hiccup mode, automatic recovery
Isolation Resistance:	100 MΩmin (500V _{dc} , 90%RH)
Manual Soldering:	425 max (5s Max)
Wave Soldering:	260 max (10s Max)
Weight:	40g-65g

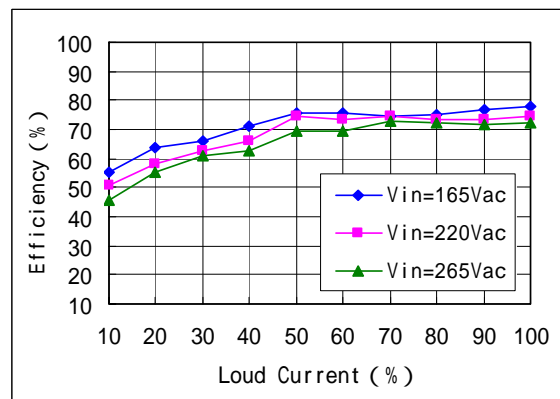
Characteristic Curves

Derating

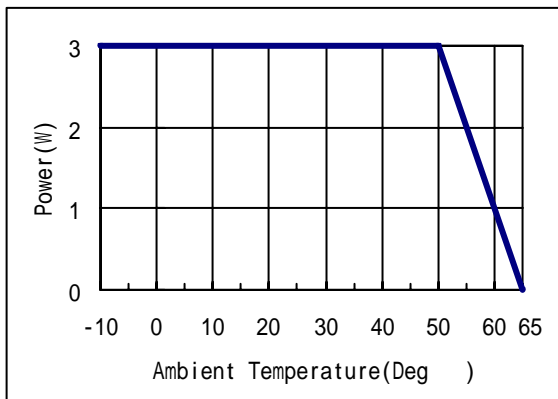


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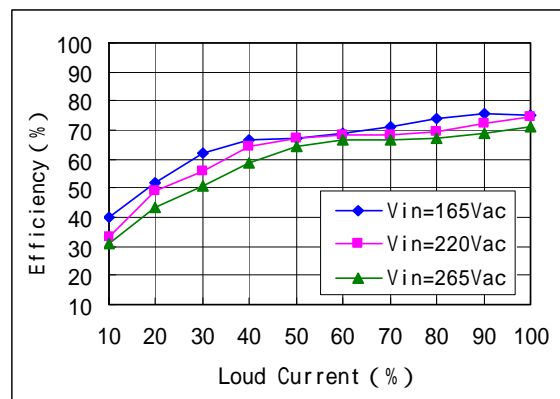
Efficiency



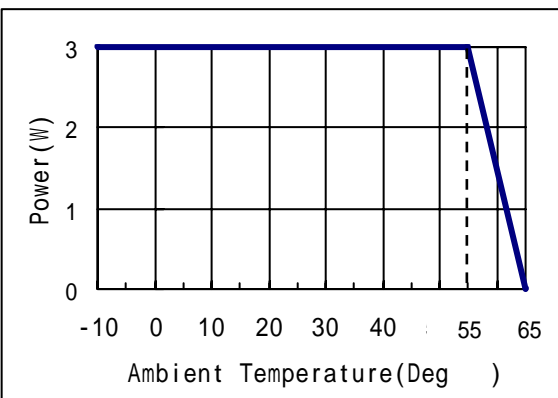
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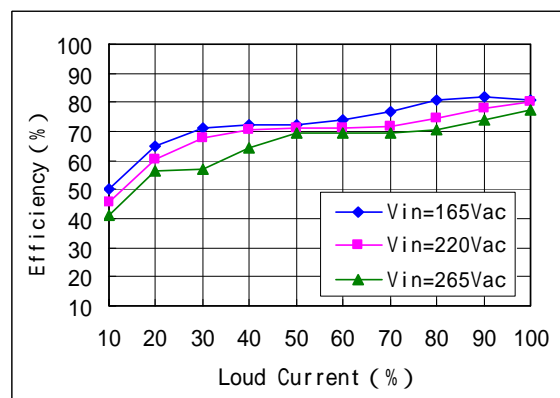
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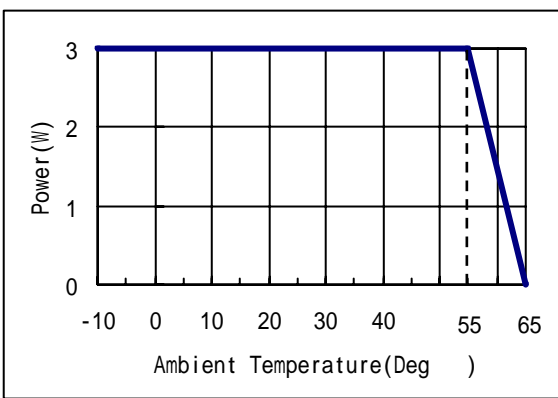
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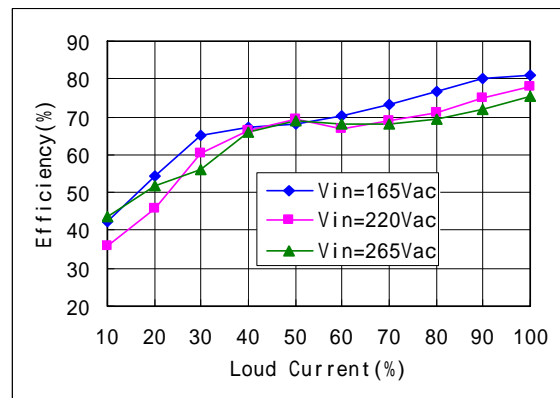
YAS3-15-N



YAS3-15-N



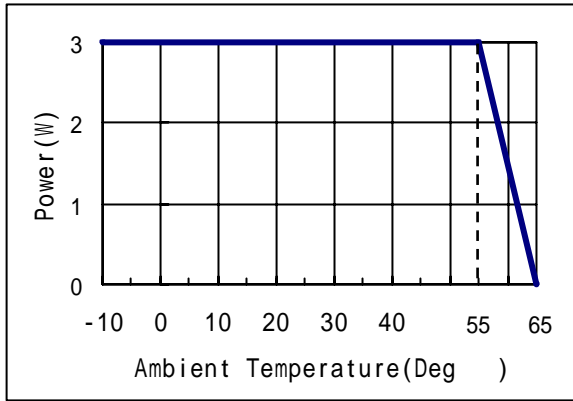
YAS3-24-N



YAS3-24-N

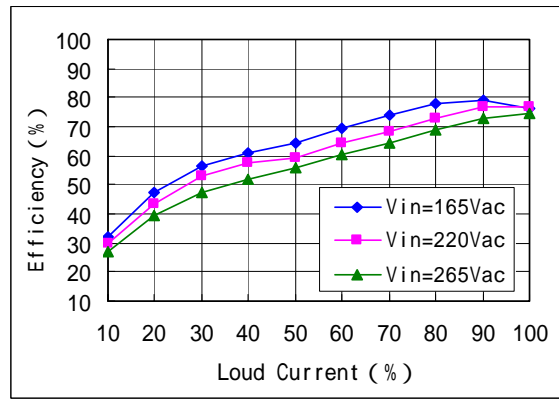
AC-DC Power Module YA3 Series

Derating

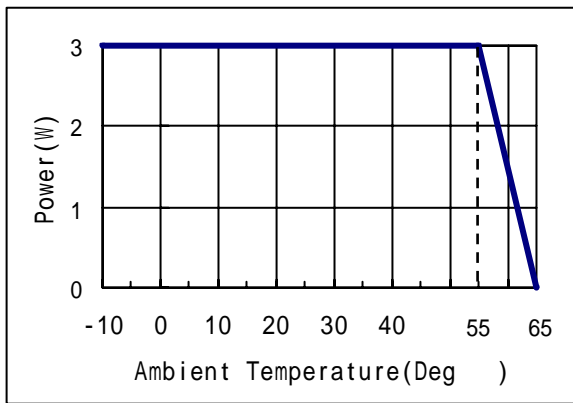


YAS3-48-N

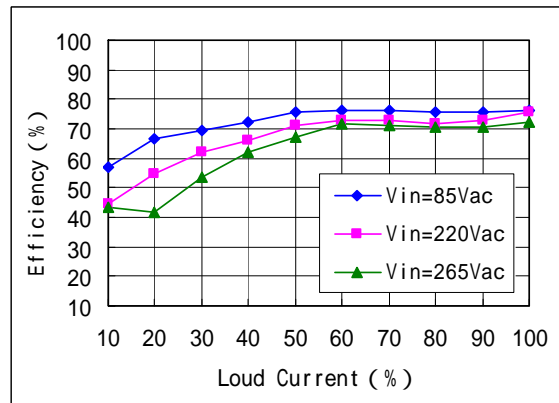
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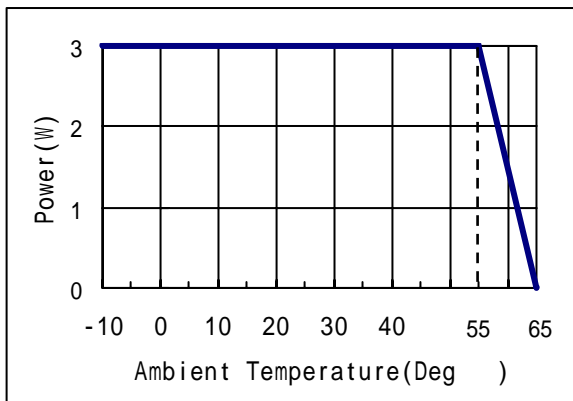
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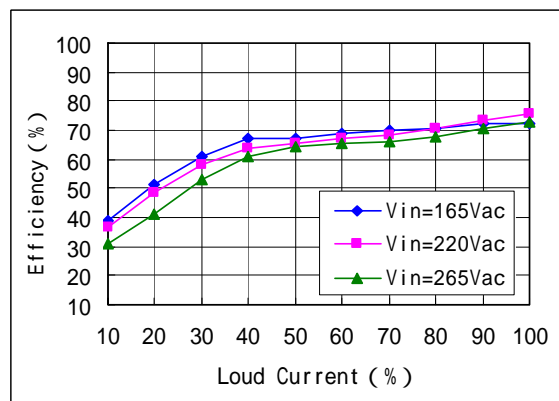
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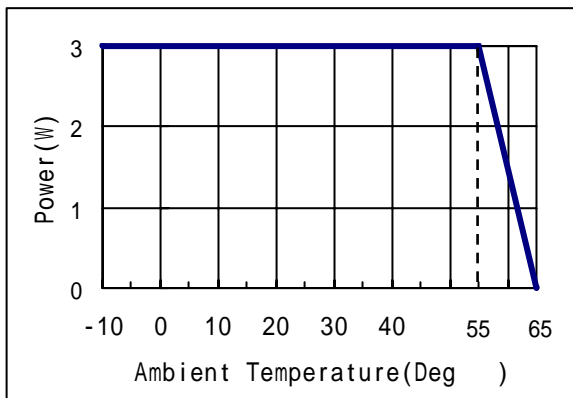
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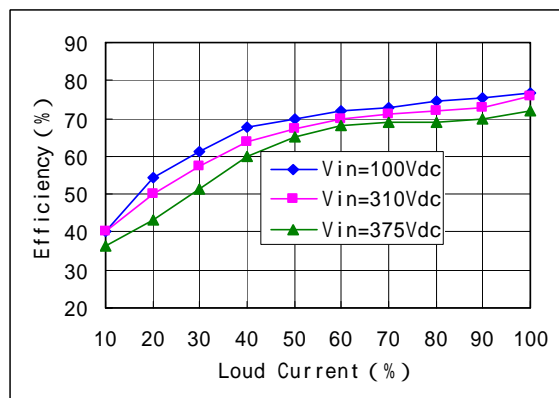
YAS3-15-W



YAS3-15-W



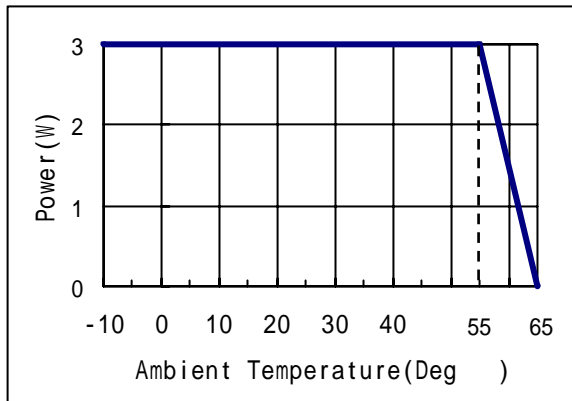
YAS3-24-W



YAS3-24-W

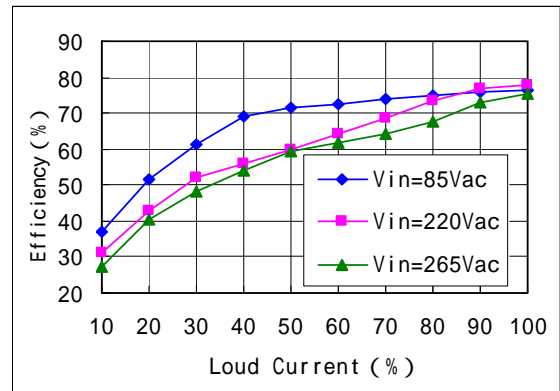
AC-DC Power Module YA3 Series

Derating

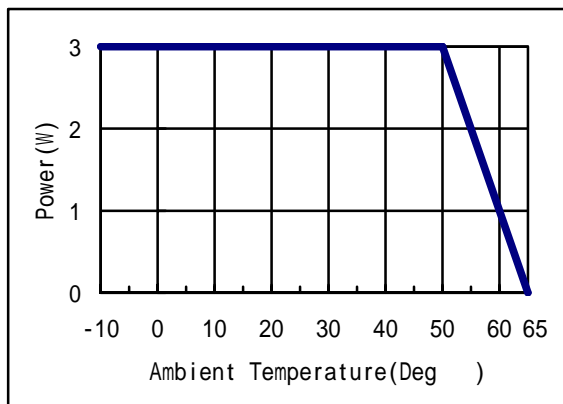


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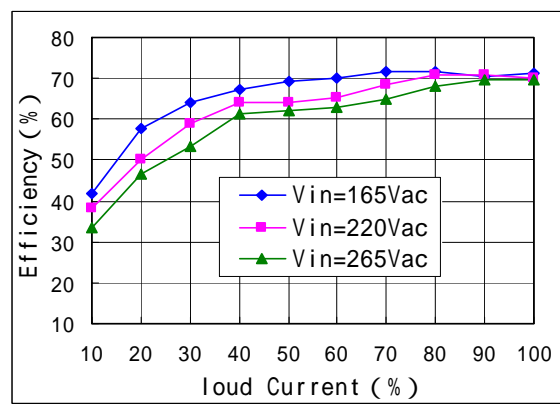
Efficiency



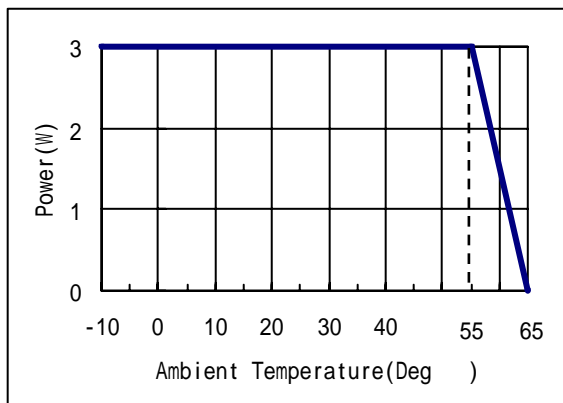
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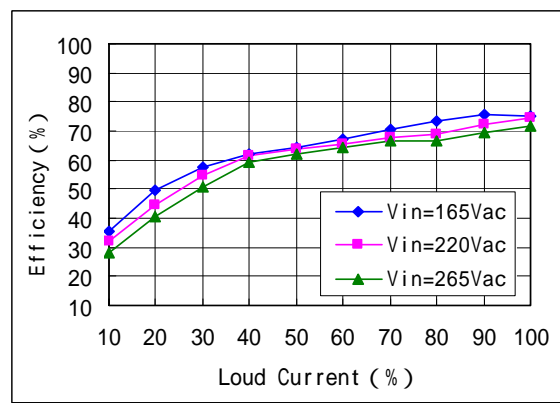
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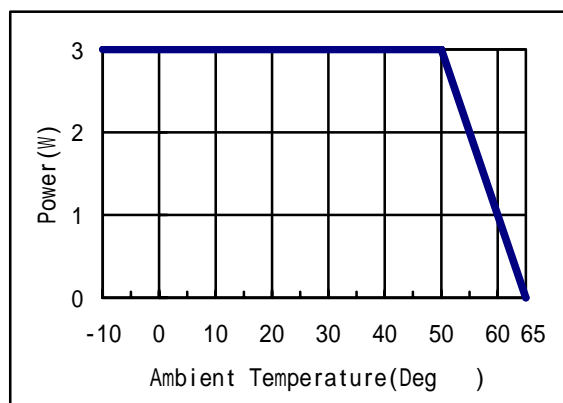
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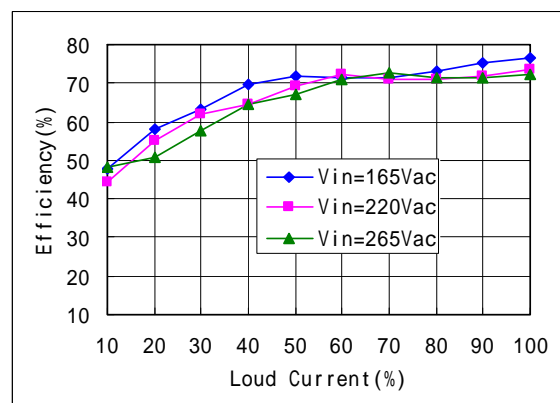
YAD3-12-N



YAD3-12-N



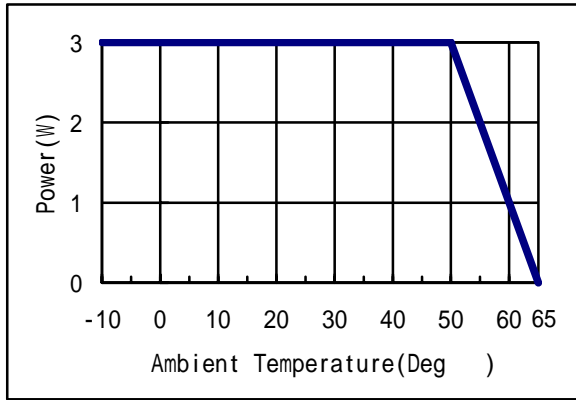
YAD3-0505-NI



YAD3-0505-NI

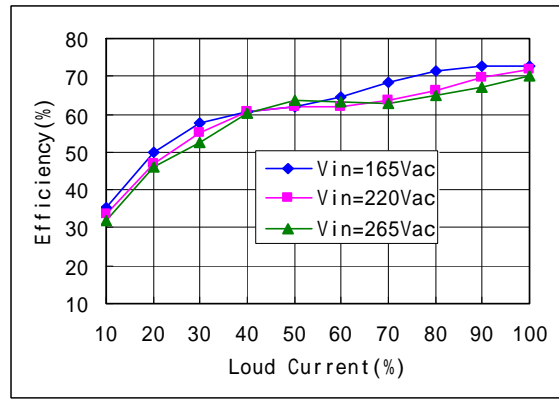
AC-DC Power Module YA3 Series

Derating

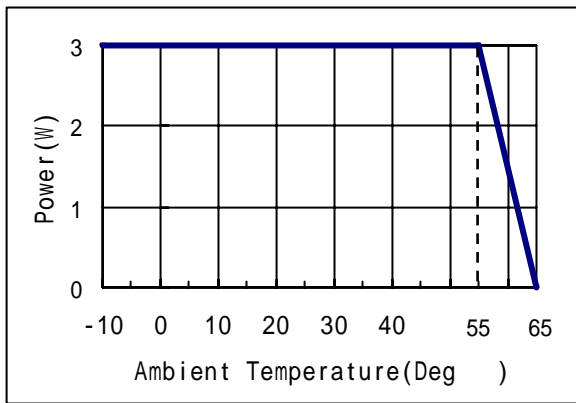


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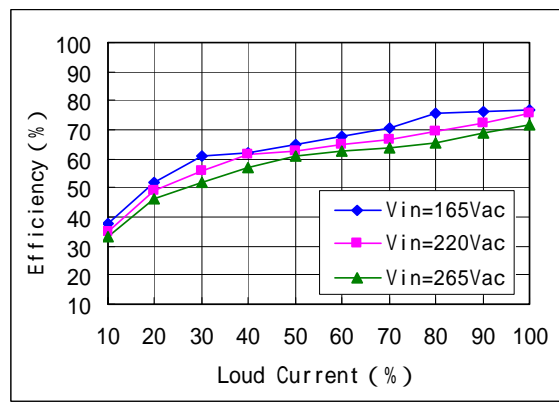
Efficiency



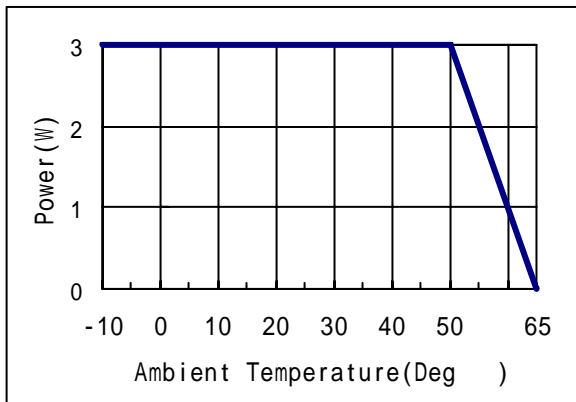
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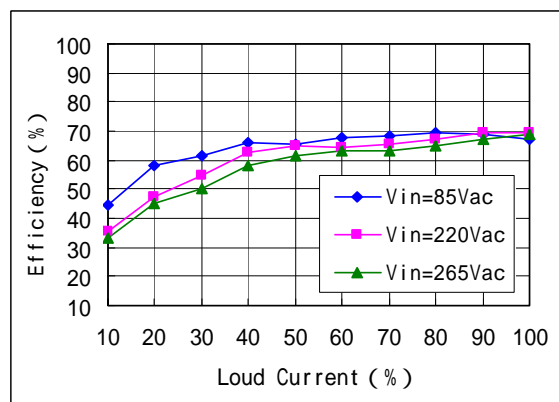
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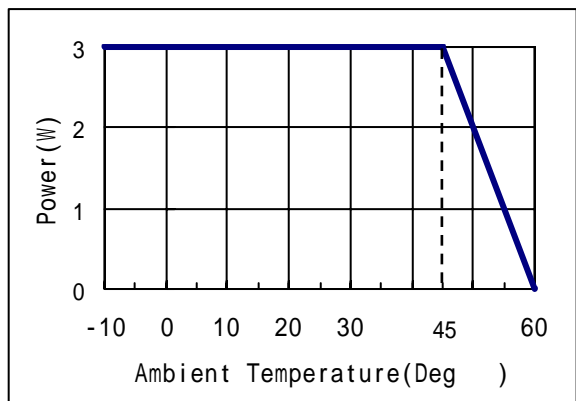
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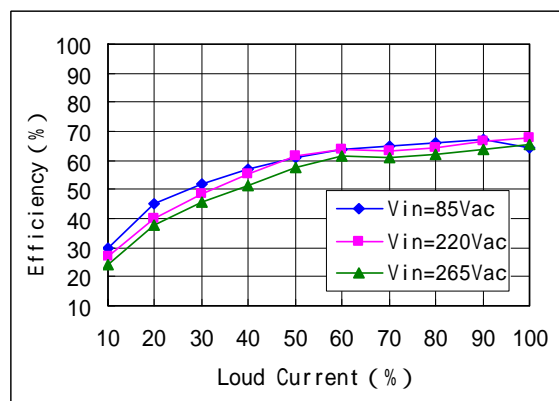
YAD3-5-W



YAD3-5-W



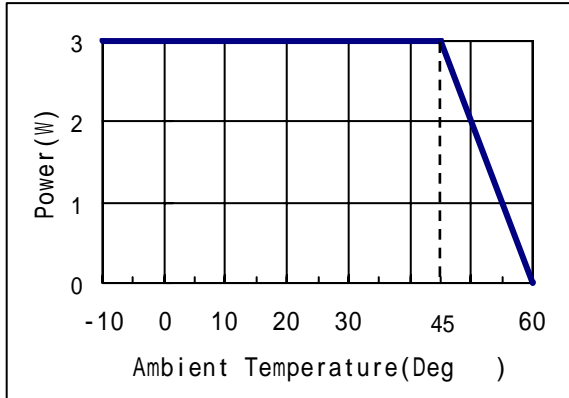
YAD3-15-W



YAD3-15-W

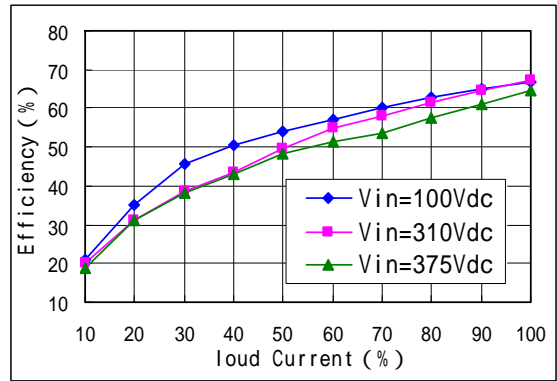
AC-DC Power Module YA3 Series

Derating

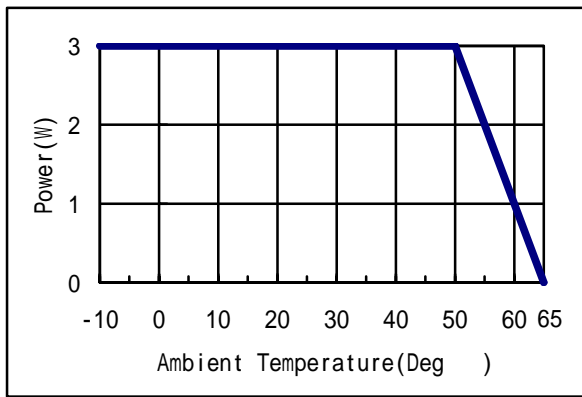


YAD3-24-W

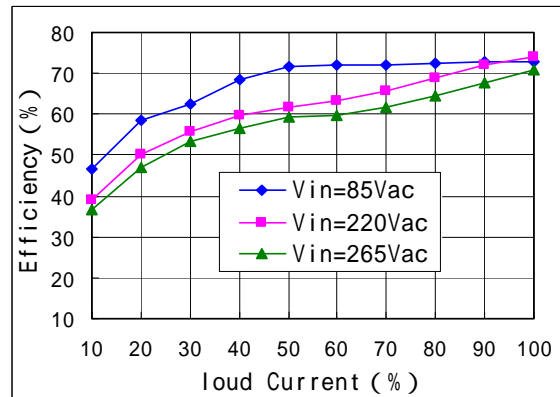
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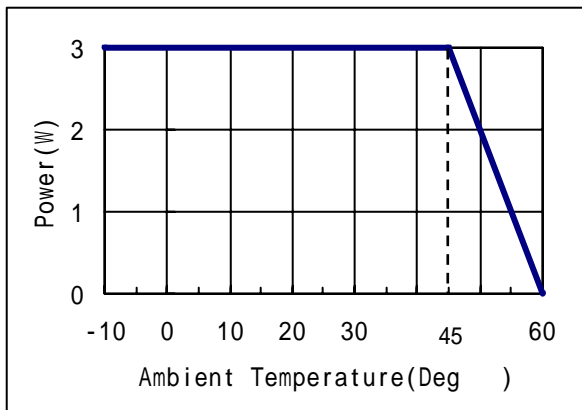
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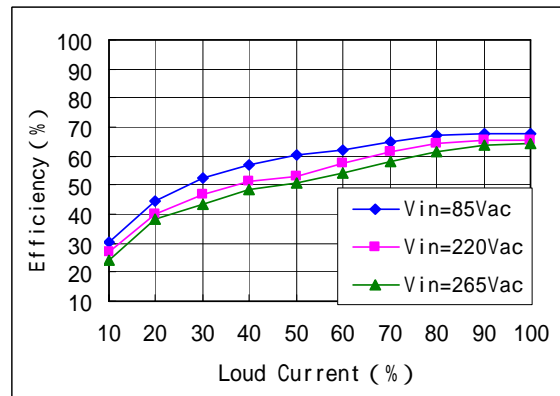
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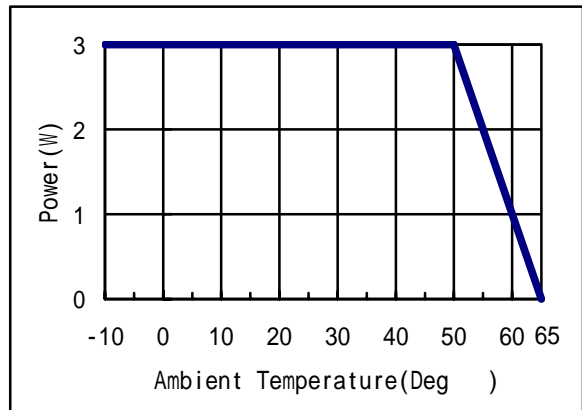
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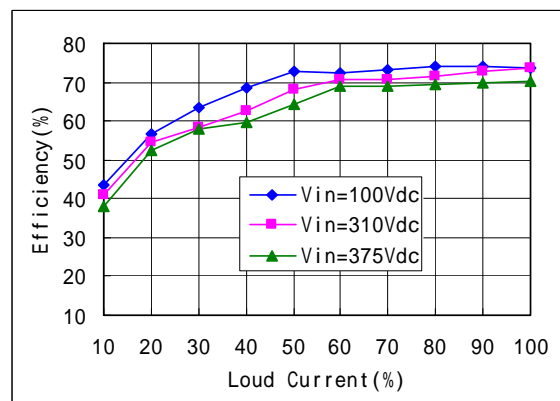
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YAD3-0512-WI



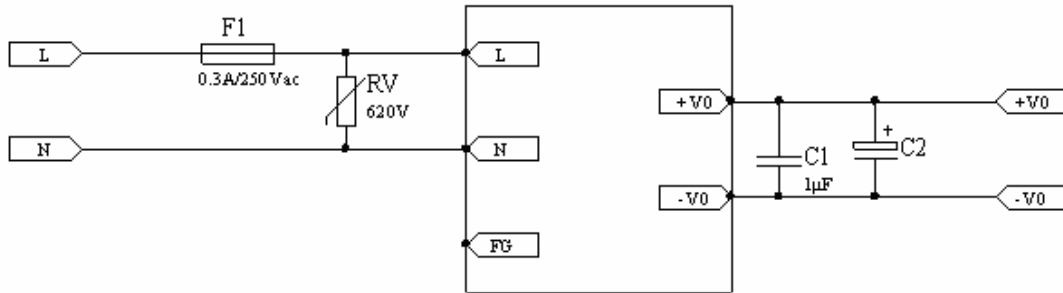
YAT3-0512-WI



YAT3-0512-WI

Design Considerations

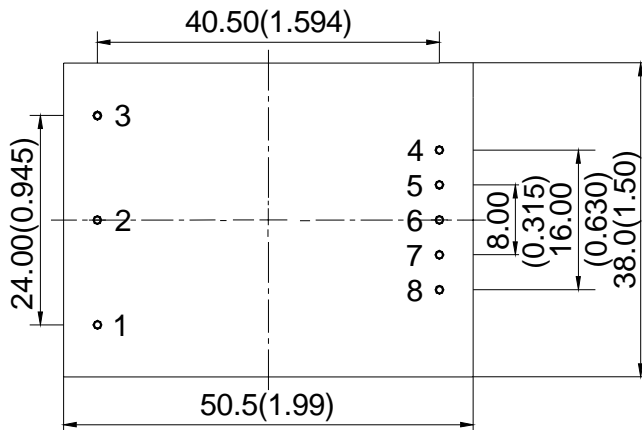
Basic Connection



Notes :

1. The pins of L、 N lines should be connected to the AC power outlet.
2. Please refer the instruction followed for further information.
3. F1: fuse , R1:VDR , C1:MLCC , C2: Electrolytic capacitor:22µF~220µF low esr capacitor.

Recommended Layout



No.	Recommendation & Notes
Pad Design	Pad hole: 1.2mm, pad diameter including hole: 2.5 mm.
Airflow Direction	The plastic case also is considered heat sink. Advised not to put flat surface down after mounted.
Safety	Isolated module, care to the spacing between input and output.
Electrical	The Vin(-) and Vo(-) planes should be placed under of the module separately. Avoid routing sensitive signal or high disturbance AC signal under the module.

Safety Consideration

The module, as one component for the end user, should be installed into the equipment. It is required to meet safety requirements in the system design. To avoid fire and be protected when short circuit occurred, it is recommended that a fast blow fuse with rating no less than 0.5A(Inrush current suppression circuit is required for greater filter capacitance at input terminal, or it will result in the disoperation of the fuse.) .

Series and Parallel Operation

The modules should not be paralleled directly to increase power, but they can be paralleled each other through o-ring switches or diodes. Make sure that every module’s maximum load current should not exceed the rated current at anytime. The modules can operate in series. To prevent against start-up failure due to start up time difference, SBD with low voltage difference can be paralleled at the

output pins(SBD negative terminal connect to the positive pin of the output) for each module.

Delivery Package Information

Package material is multiple wall corrugated with less than 10⁹ Ω surface resistance; internal material is anti-static foam with less than 10⁵ Ω surface resistance. Tray capacity: 6×4=24 PCS/box , Tray weight: 1.05kg~1.10kg, , Carton capacity:15×24=360 PCS, Carton weight: 16.5kg~17.0kg.

Quality Statement

The modules are manufactured in accordance with ISO 9001 system requirements, in compliant with YD/T1376-2005, andn are monitored 100% by auto-testing system, 100% burn in. The warranty for the modules is 2-year.

Contact Information

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