

AK42A Dual

Surface Mount

15 Watts

AK42A Dual Series

Total Power	15 Watts
Input Voltages	48V, 24VDC
# of Outputs	Dual



SPECIAL FEATURES

- Surface mount
- High power density 15W/Cu. in.
- Full power capability without external heat sink
- Input differential and common mode filtering
- Hot insertable with inrush current limit
- Ability to limit inrush current in an external input capacitor
- Input undervoltage lockout with hysteresis
- Output overvoltage protection
- Remote shutdown
- Loadsharing on dual outputs

ENVIRONMENTAL

Operating ambient temperature range:
-40 to +75° C (no derating)

Cooling method: Convection

MTBF: 7.5 Mhrs

Storage temperature: -55 to +125 C

SAFETY

UL	1950
IEC	950
CSA	C22.2-9.50
CB	52719-106

ELECTRICAL SPECIFICATIONS

Input

Input Range: 36 to 75 VDC for 48V
18 to 36 VDC for 24V

Maximum Inrush

Current Limit: 1.0 A Max.

Maximum External Capacitor
to Limit Inrush

Current to 1.0 A 4.0 μ F

Low Input Shutdown: 34.0 +/- 2.0 V for 48V
17.0V +/- 1.0V for 24 V

Auto Recovery: 37.0V +/- 2.0 V for 48V
18.5V +/- 1.0 V for 24V

Hysteresis: 3 V +/- 1 V for 48V
1.5V +/- 0.5V for 24V

Efficiency: 85%

Enable: Open Circuit or up to 0.5V max.

Disable: 4V min., 75V max.

Output

Voltage Tolerance: +/- 3% for single output
+/- 5% for dual output

Noise/Ripple: 75mV rms max.

Output Voltage

Adjust Range: +/- 10% for single output
dual output non adjustable

Output Voltage Protection Self-limiting Clamp, 140% max.

Short Circuit Protection Continuous Auto Start

Switching Frequency: 200kHz nominal

NOTES

1. All specifications are typical at nominal input and full load unless otherwise noted.
2. Specification subject to change without notice.
3. Mechanical drawings for reference only.
4. Minimum Load: 0.2 A (min 15%)
5. Max. Capacitive Load: 330 mF

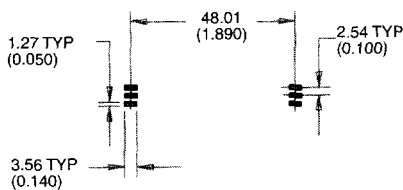
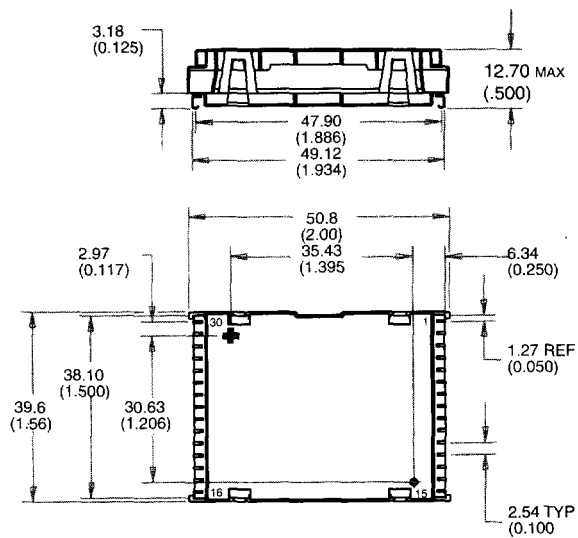


ORDERING INFORMATION

Input Voltage	Output 1 Voltage	Output 2 Voltage	Maximum Power	Model Number
Dual Output- 15 Watts Total Output Power				
18-36	2.5V	1.8V	10W/7.2W	AK42A-024L-025D018SM
18-36	3.3V	2.5V	13.2W/10W	AK42A-024L-033D025SM
18-36	5V	3.3V	15W/13.2W	AK42A-024L-050D033SM
36-75	2.5V	1.8V	10W/7.2W	AK42A-048L-025D018SM
36-75	3.3V	2.5V	13.2W/10W	AK42A-048L-033D025SM
36-75	5V	3.3V	15W/13.2W	AK42A-048L-050D033SM

DIMENSIONS

Dual Output Version



RECOMMENDED PAD LAYOUT

- NOTES:
 1. All dimensions in mm and (inches)
 2. Basic Tolerances:
 .X ± 0.05 (0.02)
 .XX ± 0.25 (0.010)

Maximum Weight: Dual Output: 30 grams

PIN ASSIGNMENTS

Dual Output

1. +Vout
2. +Vout
3. +Vout
4. +Vout
5. -Vout
6. -Vout
7. -V out
8. -Vout
9. Reserved
10. Adjust
11. Reserved
12. Reserved
13. Reserved
14. Reserved
15. Reserved
16. Reserved
17. +Vin
18. Shutdown
19. -Vin
20. Reserved

Derating Curve (T_{ref} < 105°C)

