

100 Watts

AK45C-20/ AV45C-20

High Efficiency



Total Power: 100 Watts
Input Voltages: 48V
No. of Outputs: Single

Special Features

- High efficiency
- -40°C to +100°C Baseplate operating temperature (with no derating)
- Industry standard package 1.45" x 2.28" x 0.5"
- High capacitive load limit on start-up
- Remote sense compensation
- Basic insulation
- Regulation to zero load
- Fixed frequency switching (375kHz)

Environmental

Operating case temperature range:
-40°C to +100°C

Storage temperature: -55°C to +105°C

Overtemperature protection: 110°C typical

MTBF: > 1 million hours

Safety

AK45C:

UL,cUL 1950
TUV EN60950
Basic Insulation

AV45C:

UL 1950
CSA 22.2-950-95
TUV EN60950
Operational Insulation

Electrical Specs

Input

Input Range 36 to 75 VDC
Input Surge 100V /100ms
Efficiency 89% @5Vo Typ
86% @3.3Vo Typ
84% @2.5Vo Typ

Output

Load Regulation 0.2% typical down to no load (output 5V and above)
10mV typical down to no load (output below 5V)

Line Regulation 0.1% typical (output 5V and above)
10mV typical (output below 5V)

Voltage Tolerance ±1%

Noise/Ripple 100mV max typ

Remote sense Up to 0.5V

Transient Response 5% max deviation with 25% to 75% full (output 5V and above)
200mV (output below 5V)
500µs (max) recovery

Overvoltage Protection 130% nominal output (output 5V and above)
160% nominal output (1.8V and 2V)
140% nominal output (3.3V output)

Current Limit 115% nominal output

Switching Frequency 375kHz (typ)

Control

Voltage Adjust 90 to 110% Vo (1.8 V)
80 to 110% Vo (2.5, 3.3, 5 V)

Enable TTL compatible
(positive & negative enable options)

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AK45C/AV45C

Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	1.5V	20A	85% Min	AV45C-048L-015F20HA
48V	1.8V	20A	85% Min	AV45C-048L-018F20HA
48V	3.3V	20A	89% Min	AV45C-048L-033F20HA
48V	5V	20A	90% Min	AV45C-048L-050F20HA
48V	1.8V	20A	81% min (84% typ)	AK45C-048L-018F20HA
48V	2.5V	20A	84% min (86% typ)	AK45C-048L-025F20HA
48V	3.3V	20A	86% min (88% typ)	AK45C-048L-033F20HA

NOTES:

Enable Function

"N" = negative logic enable (without "N" = positive enable)

AK45C Product Designed with Basic Insulation. AV45C product Designed with Operational Insulation

Pin Assignments

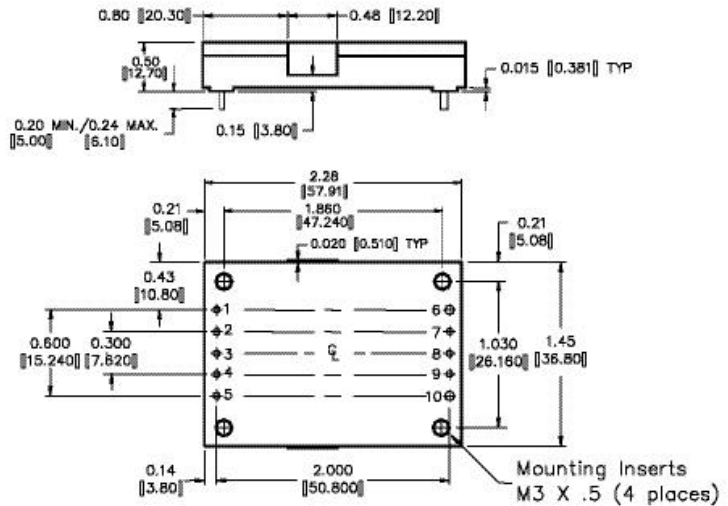
Single Output

1. -Vin
2. No Pin
3. Enable
4. No Pin
5. + Vin
6. Rtn
7. - Sense
8. Trim
9. +Sense
10. +Vout

Note: Pins 4 & 8 are .062" dia.
 All other pins are .040" dia.

Notes:

Nominal values apply with sense pins connected to +Vout and Ground Return with other control pins unconnected.



Astec Industry Standard