



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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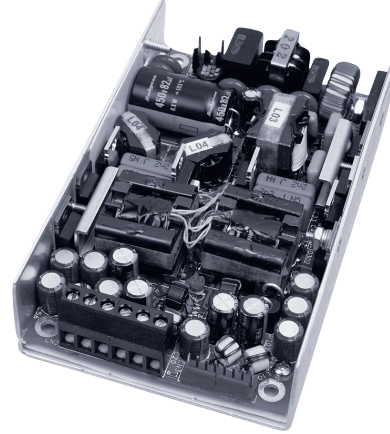
## Model

## Miniature Switch Mode Power Supply

# AAD160

**H.A.L.T.** Highly Accelerated  
TESTED Life Testing

- 160 Watts output power
- Power Factor Correction
- Parallel/Redundant Operation
- Up to 88% Efficiency



### Electrical Specifications

Input Voltage:	90-264 VAC, 47-63 Hz
Input Current:	<2A RMS @ 115 VAC @ full load <1A RMS @ 230 VAC @ full load
Inrush Current:	<35A, pk @ 132 VAC @ cold start <75A, pk @ 264 VAC @ cold start
Power Factor:	>0.98 @ full load @ 115/230VAC input
Harmonic Distortion:	Meets EN61000-3-2
EMI Filtering:	Meets CISPR 11 and 22 and FCC Part 15 Class B (conducted)
Input Protection:	Internal AC line fuse; 250 VAC, 4.0A
Surge Withstand:	Meets EN61000-4
Output Power:	160W with 20CFM air; 80W Convection cooled (consult factory for current ratings)
Line Regulation:	± 0.3%
Load Regulation:	± 1% for V1 and V2 ± 7% for V3; ± 5% for V4
PARD:	Greater of 1% or 50mV 20MHz bandwidth
Hold-up Time:	>20 ms @ full load
Turn-on Delay:	<2 seconds
Output Polarity:	See Voltage Chart
Minimum Load:	10% for V1 and V2 5% for V3 and V4
Transient Response:	Greater of 150mV or 3% for 25% load change @ 1A/μs (V1 and V2)

Output Rise Time:	<100 ms (10% to 90%)
Remote Sense:	Standard on V1 and V2 Up to 400mV of cable drop
AC Power Fail:	TTL <sub>LOW</sub> logic "0" at least 5 ms before DC output drops 5% (without signal jitter). <10mA sink current for Power Fail "0". <1mA source current for Power Fail "1".
Overshoot/Undershoot:	<5% overshoot with remote sense at output terminals
Current Share (option):	Load currents of V1 and V2 for similar units can be shared @ ±5% of total load
Overvoltage Protect:	Factory set, 125% ±5% on V1 and V2 cycle AC to reset
Short Circuit Protection:	All outputs are auto recovery
Reverse Voltage:	Reverse current up to rated outputs
Case Power Protection:	Standard operation interrupt (hiccup mode)
Efficiency:	Up to 88%
MTBF:	MIL-STD-HDBK 217E >200,000 hours @ 25°C Highly Accelerated Life Testing

### Available Voltage Outputs\*

Voltage Codes	V1 Voltages (Volts)	V1 Currents (Amps)	V2 Voltages (Volts)	V2 Currents (Amps)	V3 Voltages (Volts)	V3 Currents (Amps)	V4** Voltages (Volts)	V4 Currents (Amps)
-1	+1.8	16	+1.8	14	+1.8	3	-1.8	2
-2	+3.3	16	+3.3	14	+3.3	3	-3.3	2
-3	+5	16	+5	14	+5	3	-5	2
-4	+12	6	+12	6	+12	3	-12	2
-5	+15	5	+15	5	+15	2.5	-15	2
-6			+24	3	+24	1.75	-24	1.5
-7			+28	2.5	+28	1.5	-28	1
-8			+36	2	+36	1.5	-36	1
-9			+48	1.5	+48	1	-48	1

\* Consult factory for other voltages and OEM quantities.

\*\* Standard Polarity for V4 is negative (-). V4 is available with positive polarity as a Tailored or Custom model.

Note: Standard models are 3244, 3255, 3264, 3404 and 3464

### PART # STRUCTURE:

**MODEL** - **VOLTAGE CODE** - **OPTION CODES** (See back)  
 - V1 V2 V3 V4 -  
**AAD160** - **X X X X** - **ABC...**

Example: Model Number **AAD160-3244-AM** = 160W Power Factor Corrected, (V1) +5V @ 16A, (V2) +3.3V @ 14A, (V3) +12V @ 3A and (V4) -12V @ 2A with Current Sharing and Metric Mounting.

CLICK HERE TO SEE THE AAD160 CODE TABLE AND AVAILABLE OPTIONS.



**Model**  
**AAD160**  
**Options (code)**

- #6-32 PEM Nut (Standard)
- PF Invert (B)
- Metric Mounting (M)
- Input and Options with Gold Pins (G)
- Molex Output Connector with Gold Pins (J)
- Molex Connectors with Standard Pins (K)
- Current Sharing (A)
- Thru-Hole Mounting (C)
- PF Open Collector (O)

**Compliance**

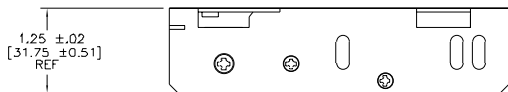
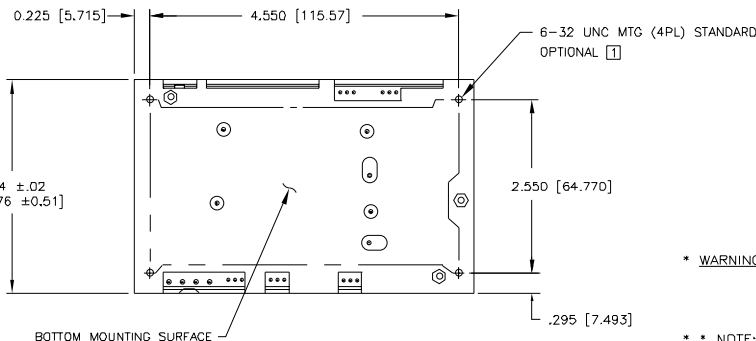
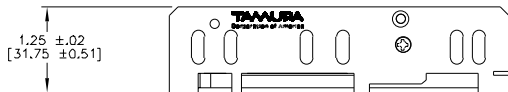
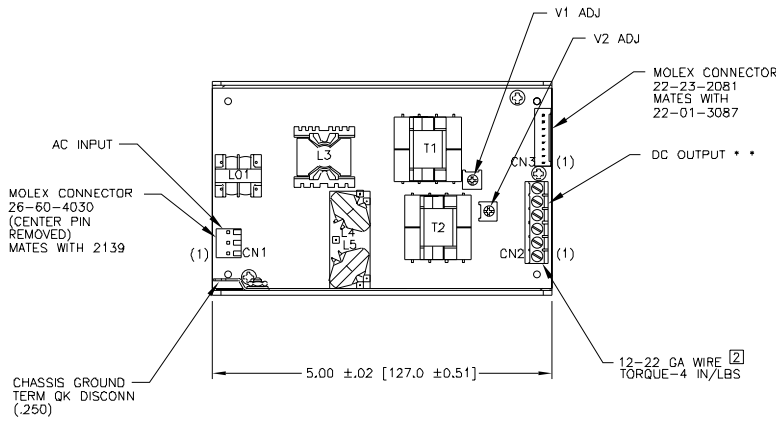
- EN61000-4-5 Level 3
- EN61000-3-2
- EN61000-4-4 Level 3
- CISPR 11 and 22 FCC Part 15 Class B (conducted)
- EN61000-4-2 Level 2
- EN61000-4-2 Level 3 (Air Only)
- EN61000-4-11

**Certifications**

- UL60950-1
- IEC60950-1
- CSA C22.2 No. 60950-1
- EN60950-1

**Physical Specifications**

- Dimensions: (HxWxL) 1.25" x 3.14" x 5"
- Operating Temp: 0 to 50°C; rated power to 50°C with 20CFM air
- Relative Humidity: 5% to 90%, non-condensing
- Storage: -50 to 85°C/20-90% RH
- Altitude: 10,000' operating; 40,000' storage



PIN NO.	CN1
1	AC LINE
2	
3	NEUTRAL

MOLEX CONNECTOR  
26-60-4030  
CENTER PIN  
REMOVED

PIN NO.	CN2	
1	V3	**
2	V2	**
3	RTN	
4	RTN	
5	V1	**
6	V4	**

FOR  
12-22 GA WIRE  
TORQUE-4 IN/LBS

PIN NO.	CN3	
1	V2 CURRENT SHARE	
2	V1 CURRENT SHARE	
3	POWER FAIL	
4	RTN	
5	V1 -REMOTE SENSE	*
6	V1 +REMOTE SENSE	*
7	V2 +REMOTE SENSE	*
8	V2 -REMOTE SENSE	*

MOLEX CONNECTOR  
22-23-2081

UNIT WEIGHT	
0.72 LBS	

\* **WARNING:** DAMAGE WILL OCCUR IF REMOTE SENSE LEADS ARE REVERSED OR USED WITH LOAD DISCONNECTED FROM RESPECTIVE OUTPUTS.

\* **NOTE:** FOR PROPER REGULATION MINIMUM LOADS ARE REQUIRED, 0.5A FOR V1 AND V2, 0.1A FOR V3 AND V4

[2] OPTIONAL- MOLEX CONNECTOR LIMITED TO 7A FOR V1, V2 OUTPUT

[1] OPTIONAL- #6 CLEARANCE HOLE PROVIDED THROUGH THE BOARD AND CHASSIS FOR TOP SIDE MOUNTING OF POWER SUPPLY.

NOTES: UNLESS OTHERWISE SPECIFIED.

