

Power Supply Datasheet Review Checklist

OEM Procurement Guide | 37 Check Items | 8 Categories
yhyppoweradapter.com/how-to-read-power-supply-datasheet/

How to Use This Checklist

1. Print this checklist alongside the vendor's power supply datasheet.
2. Walk through all 37 items sequentially -- start from Input Specifications.
3. For each item, check if the datasheet meets your requirement.
4. Use the Vendor Comparison table (last page) for side-by-side evaluation.

Scoring:

PASS = Zero Critical fails, < 10% items flagged

REVIEW = 1-2 Critical fails or 10-30% flagged

REJECT = 3+ Critical fails or > 30% flagged

Critical	= Must pass -- any FAIL disqualifies the vendor
High	= Investigate all flags before proceeding
Medium	= Awareness items -- rarely blocking

Source article: *How to Read a Power Supply Datasheet: OEM Procurement Guide*

Contact: yhysales@yhyppower.com

Input Specifications

___	1.1	Input voltage covers all target markets (100-240 VAC auto-ranging)	Critical	Manual voltage selector instead of <u>aut.</u> ___
___	1.2	Input frequency (50/60 Hz) matches target markets	Medium	Datasheet omits frequency range ___
___	1.3	Max input current stated at worst-case (min V + full load)	High	Listed as 'typical' not 'maximum' ___
___	1.4	Inrush current peak and duration specified	High	Inrush > 100 A peak without <u>soft-start</u> ___
___	1.5	PFC stated and compliant (> 75 W markets)	High	No PFC statement for regulated <u>market</u> ___
___	1.6	Leakage current suitable for application class	Critical	Leakage at wrong test voltage ___

Output Specifications

___ 2.1	Output voltage tolerance at worst-case conditions	High	Tolerance at room temp only ___ ___ ___
___ 2.2	Continuous rated current sufficient at max ambient	Critical	Peak current without duty cycle ___ ___ ___
___ 2.3	Derating curve (power vs. temperature) available	Critical	No derating curve provided ___ ___ ___
___ 2.4	Output derating vs. input voltage checked	High	Specs at nominal input only ___ ___ ___
___ 2.5	Ripple & noise within load tolerance	High	No measurement conditions <u>given</u> ___ ___
___ 2.6	Load regulation acceptable during transients	Medium	Recovery > 1 ms for sensitive <u>loads</u> ___
___ 2.7	Line regulation within load tolerance	Medium	Worse than $\pm 2\%$ for precision <u>load</u> ___ ___

Protection & Safety

___ 3.1	OVP threshold below load's absolute max rating	Critical	OVP not specified ___ ___ ___
___ 3.2	OCP/SCP present (hiccup auto-recovery preferred)	High	Latching in unattended application ___ ___
___ 3.3	OTP shutdown temp compatible with enclosure	High	OTP below enclosure max temp ___ ___
___ 3.4	Isolation voltage meets safety class	Critical	Insufficient for 3 kVDC requirement ___
___ 3.5	Leakage current for normal + fault conditions	Critical	Single condition for medical <u>rated</u> ___ ___

Environmental & Mechanical

___ 4.1	Operating temp covers ambient with derating	Critical	Derating starts before your <u>ambient</u> ___
___ 4.2	Storage temp covers shipping/warehousing	Medium	Narrower than shipping <u>extremes</u> ___ ___
___ 4.3	Humidity/IP rating suitable for environment	Medium	No humidity spec for outdoor ___ ___ ___
___ 4.4	MTBF meets lifecycle at your operating temp	High	MTBF at 25 degC, you operate at <u>50 degC</u>
___ 4.5	Hold-up time ≥ 16 ms at min V + full load	High	< 10 ms at minimum input <u>voltage</u> ___ ___
___ 4.6	Mechanical dimensions compatible with enclosure	Medium	No mechanical drawing <u>available</u> ___ ___

Efficiency & Energy Compliance

___ 5.1	Efficiency level meets market (DoE VI, ErP, etc.)	High	Marketing claim, no cert body <u>verifica.</u> ___
___ 5.2	Efficiency curve at 25/50/75/100% load	Medium	Only stated at full load ___ ___ ___
___ 5.3	No-load / standby power within limits	Medium	No-load power not stated ___ ___ ___
___ 5.4	Efficiency cert marks with certificate numbers	High	Mark without verifiable number ___ ___ ___

Certification & Compliance

___	6.1	All required safety certifications listed	Critical	Only one cert for multi-market	___	___	___
___	6.2	Certificate numbers provided (UL File#, CB#)	Critical	Generic logo, no file number	___	___	___
___	6.3	Certification on current standard edition	Critical	Obsolete standard	___	___	___
___	6.4	EMC/EMI compliance (FCC B, EN 55032)	High	Class A for consumer product	___	___	___
___	6.5	RoHS/REACH/WEEE compliance stated	Medium	Vague 'RoHS compliant'	___	___	___

Documentation & Commercial

___	7.1	Datasheet is latest published version	Medium	Revision > 12 months old	___	___	___
___	7.2	Third-party test reports for critical params	High	Vendor refuses test reports	___	___	___
___	7.3	Mechanical drawing (DXF/PDF) reviewed	High	No mechanical drawing	___	___	___
___	7.4	Lead time and MOQ confirmed in writing	High	MOQ exceeds 6 months demand	___	___	___

Vendor Cross-Comparison Matrix

Wt	Parameter	V A	Score	V B	Score	V C	Score
5	Unit Price (@ target volume) (\$)						
3	Lead Time (weeks) (weeks)						
3	MOQ (pieces) (pcs)						
5	Certifications matching markets (0-5) (score)						
4	Protection features present (0-5) (score)						
5	Full power temp (degC before derating) (degC)						
3	MTBF (hours) (hours)						
3	Hold-up time at min V (ms) (ms)						
3	Ripple & Noise (mVpp) (mV)						
4	Warranty (years) (years)						
4	Test reports available? (Y/N)						
3	Mechanical drawing available? (Y/N)						
3	Quality history (1-10) (1-10)						

WEIGHTED TOTAL SCORE

Weight x Score (1-10). Higher total = better fit. Enter vendor data and score (1-10) in the columns.

Scoring Summary

	Section	Items	Critical	High	Medium	Result
	TOTAL	37	11	16	10	

Result:

PASS = Zero Critical fails AND < 10% items flagged (3 or fewer)

REVIEW = 1-2 Critical fails OR 10-30% items flagged (4-11 items)

REJECT = 3+ Critical fails OR > 30% items flagged (12+ items)