

Input voltage up to 144 VDC
Single output of 5.1 to 48 VDC
No input-to-output isolation



Features

- RoHS lead solder exemption compliant
- Efficiency up to 96%
- Low input-output differential voltage
- No derating over temperature



Model Selection

Output		Input voltage V_i [VDC]	Rated power P_{otot} [W]	Efficiency η [%]	Type	Options
V_{onom} [VDC]	I_{onom} [A]					
5.1	4 (5) ¹	15 - 144	25.5	80	PSB 5A4-7iR	-9, L, P, C
5.1	6	8 - 80	30.6	81	PSB 5A6-7iR	-9, L, P, C
5.1	7	7 - 40	35.7	84	PSB 5A7-7iR	-9, L, P, C
5.1	8	7 - 40	40.8	81	PSB 5A8-2	iR-Package
12	3 (4) ¹	18 - 144	48	89	PSB 123-7iR	-9, L, P, C
12	5	15 - 80	60	90	PSB 125-7iR	-9, L, P, C
12	6	15 - 40	72	90	PSB 126-2	iR-Package
15	3 (4) ¹	22 - 144	60	90	PSB 153-7iR	-9, L, P, C
15	5	19 - 80	75	92	PSB 155-7iR	-9, L, P, C
15	6	15 - 40	90	92	PSB 156-2	iR-Package
24	3 (4) ¹	31 - 144	96	94	PSB 243-7iR	-9, L, P, C
24	5	29 - 80	120	95	PSB 245-7iR	-9, L, P, C
24	6	29 - 60	144	95	PSB 246-2	iR-Package
36	3 (4) ¹	44 - 144	144	90	PSB 153-7iR	-9, L, P, C
36	5	42 - 80	180	92	PSB 155-7iR	-9, L, P, C
48	3 (4) ¹	58 - 144	192	96	PSB 483-7iR	-9, L, P, C

¹ For $V_i \leq 80V$

Input

Input voltage	refer to selection chart
No load input current	≤50 mA

Output

Efficiency	$V_{i\text{nom}}, I_{o\text{nom}}$	up to 96%
Output voltage setting accuracy	$V_{i\text{nom}}, I_{o\text{nom}}$	±0.6% $V_{o\text{nom}}$
Output voltage switching noise	IEC/EN 61204, total	typ. 0.3%
Line regulation	$V_{i\text{min}} - V_{i\text{max}}, I_{o\text{nom}}$	typ. ±0.3%
Load regulation	$V_{i\text{nom}}, 0 - I_{o\text{nom}}$	typ. 0.25%
Minimum load	not required	0 A
Current limitation	rectangular U/I characteristic	typ. 110% $I_{o\text{nom}}$
Operation in parallel	by current limitation	

Protection

Input reverse polarity	with external fuse (built-in fuse with option C installed)	
Input undervoltage lockout		typ. 80% $V_{i\text{min}}$
Input transient protection	suppressor diode	
Output	no-load, overload and short circuit proof	
Output overvoltage	suppressor diode in each output	typ. 150% $V_{o\text{nom}}$

Safety

Approvals	EN 60950, UL 1950, CSA C22.2 No. 950	
Protection degree		IP 20
Electric strength test voltage	I/case and O/case	500/750/1500 VDC

EMC

Electrostatic discharge	IEC/EN 61000-4-2	
Electromagnetic field	IEC/EN 61000-4-3	
Electr. fast transients/bursts	IEC/EN 61000-4-4	
Surge	IEC/EN 61000-4-5	
Conducted disturbances	IEC/EN 61000-4-6	
Electromagnetic emissions	CISPR 22/EN 55022	

Environmental

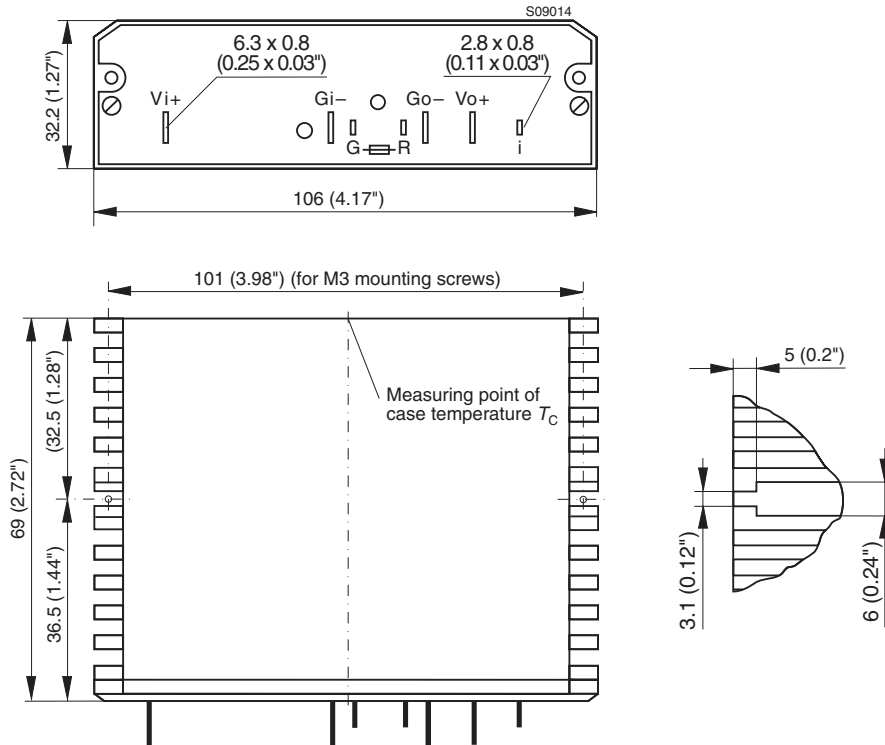
Operating ambient temperature	-2, $V_{i\text{nom}}, I_{o\text{nom}}$, convection cooled	-10 to 50°C
Operating case temperature T_C	-2, $V_{i\text{nom}}, I_{o\text{nom}}$	-10 to 80°C
Storage temperature	-2, non operational	-25 to 100°C
Operating ambient temperature	-7, $V_{i\text{nom}}, I_{o\text{nom}}$, convection cooled	-25 to 71°C
Operating case temperature T_C	-7, $V_{i\text{nom}}, I_{o\text{nom}}$	-25 to 95°C
Storage temperature	-7, non operational	-40 to 100°C
Damp heat	IEC/EN 60068-2-3	
Vibration, sinusoidal	IEC/EN 60068-2-6	
Shock	IEC/EN 60068-2-27	
Bump	IEC/EN 60068-2-29	
Random vibration	IEC/EN 60068-2-64	
MTBF	MIL-HDBK-217	

Options

Extended temperature range	-40 to 71°C, ambient, operating	-9
Inhibit, TTL input, output enabled if left open		i
Output voltage adjustment	0 - 108% $V_{o\text{nom}}$	R
Additional internal input filter		L
Output voltage adjustment	±8% $V_{o\text{nom}}$	P
Thyristor crowbar on output		C

Mechanical data

Tolerances ± 0.3 mm (0.012") unless otherwise indicated.



Accessories

- Isolation pads for easy and safe PCB mounting
- Ring core chokes for ripple and interference reduction

NUCLEAR AND MEDICAL APPLICATIONS - Power-One products are not designed, intended for use in, or authorized for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems without the express written consent of the respective divisional president of Power-One, Inc.

TECHNICAL REVISIONS - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.