



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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60 Watts

SDS Series



- Single, Dual, Triple & Quad Outputs
- Output Voltages from 3.3 V to 48 V
- Non-standard Outputs Available
- Industry Standard 3" x 5" Package
- Fits 1U Applications
- Open Frame, U Channel & Covered Versions
- 3 Year Warranty

Specification

Input

Input Voltage	• 90-264 VAC (120-370 VDC)
Input Frequency	• 47-63 Hz
Input Current	• 1.6 A max at 115 VAC • 1.0 A max at 230 VAC
Inrush Current	• <15 A at 115 VAC, cold start at 25 °C • <30 A at 230 VAC, cold start at 25 °C
Earth Leakage Current	• <0.30 mA at 115 VAC • <0.75 mA at 240 VAC
Power Factor	• EN61000-3-2, Class A
Input Protection	• T2 A/250 VAC internal fuse in line

Output

Output Voltage	• See table
Output Voltage Trim	• $\pm 10\%$ on V1 only (see note 4)
Initial Set Accuracy	• Single output models: $\pm 1\%$ • Multi-output models: $\pm 5\%$
Minimum Load	• 10% required on V1 & V2 of multi-output models to maintain regulation, unit will start up with no load
Start Up Delay	• 2 s typical
Hold Up Time	• 12 ms min at 110 VAC, 100% load
Line Regulation	• 1% from low line to high line
Load Regulation	• 7% max all models 3% typical, see table • 10% with no load on V1, for multi output models
Transient Response	• 4% max deviation, recovery to within 1% in 4 ms for a 50% load change
Ripple & Noise	• 1% pk-pk typical, 20 MHz bandwidth
Overvoltage Protection	• 112-132% of nominal output voltage on V1 only, recycle input to reset
Overload Protection	• 110-150% of nominal power, with auto recovery
Short Circuit Protection	• Trip & restart (hiccup mode), auto recovery
Temperature Coefficient	• $\pm 0.04\%/^{\circ}\text{C}$

General

Efficiency	• 80% typical, 230 VAC full load
Isolation	• 3000 VAC Input to Output • 1500 VAC Input to Ground • 500 VDC Output to Ground
Switching Frequency	• 60 kHz typical
Power Density	• 3.5 W/In ³
Signals	• Green DC OK LED
MTBF	• 190 kHrs typical to MIL-HDBK-217F at 25 °C, GB

Environmental

Operating Temperature	• 0 °C to +70 °C, derate linearly from 100% load at +50 °C to 50% load at +70 °C
Cooling	• Convection-cooled
Operating Humidity	• 5-95% RH, non-condensing
Storage Temperature	• -40 °C to +85 °C

EMC & Safety

Emissions	• EN55022, level B conducted and radiated
Harmonic Currents	• EN61000-3-2, Class A
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, level 2 contact, level 3 air, Perf Criteria A
Radiated Immunity	• EN61000-4-3, level 2, Perf Criteria A
EFT/Burst	• EN61000-4-4, level 2, Perf Criteria A
Surge	• EN61000-4-5, installation Class 3, Perf Criteria A
Conducted Immunity	• EN61000-4-6, level 2, Perf Criteria A
Magnetic Field	• EN61000-4-8, 1 A/m, Perf Criteria A
Dips & Interruptions	• EN61000-4-11, 30% 10 ms, • 60% 100 ms, 100% 5000 ms • Perf Criteria A, B, B
Safety Approvals	• EN60950-1, UL60950-1, • CSA60950-1 per cUL

Models and Ratings

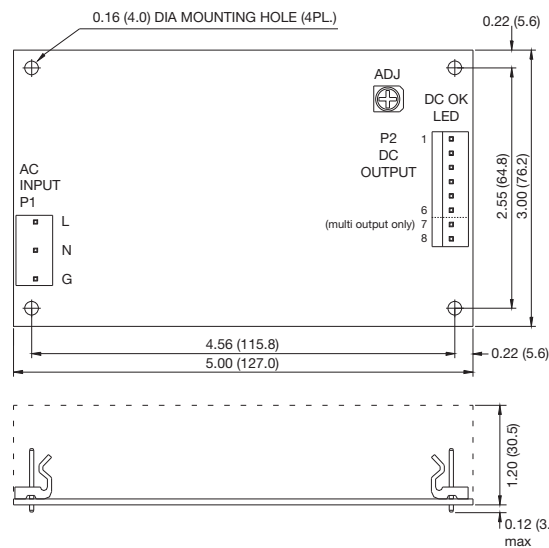
Output Power	Output Voltage	Output Current	Factory-Set Voltage Range ⁽¹⁾	Current Range	Total Regulation	Model Number ^(5,6)
50 W	3.3 V	15.1 A	3.0-5.0 VDC	16.6-10.0 A	5%	SDS60US03
55 W	5.0 V	11.0 A	5.0-6.0 VDC	11.0-9.1 A	5%	SDS60US05
60 W	7.0 V	8.6 A	6.0-8.0 VDC	10.0-7.5 A	4%	SDS60US07
63 W	9.0 V	7.0 A	8.0-11.0 VDC	7.8-5.7 A	3%	SDS60US09
63 W	12.0 V	5.2 A	11.0-13.0 VDC	5.7-4.8 A	3%	SDS60US12
63 W	15.0 V	4.2 A	13.0-16.0 VDC	4.8-3.9 A	3%	SDS60US15
63 W	19.0 V	3.3 A	16.0-21.0 VDC	3.9-3.0 A	3%	SDS60US19
63 W	24.0 V	2.6 A	21.0-27.0 VDC	3.0-2.3 A	2%	SDS60US24
63 W	30.0 V	2.1 A	27.0-33.0 VDC	2.3-1.9 A	2%	SDS60US30
63 W	36.0 V	1.7 A	33.0-40.0 VDC	1.9-1.5 A	2%	SDS60US36
63 W	48.0 V	1.3 A	40.0-50.0 VDC	1.5-1.2 A	2%	SDS60US48

Output Power	Output V1 ^(2,3,4)	Output V2 ^(2,3,4)	Output V3 ⁽³⁾	Output V4 ⁽³⁾	Model Number ^(5,6)
63.0 W	+5.0 V/7.0 A	+12.0 V/3.0 A			SDS60UD01
48.1 W	+3.3 V/7.0 A	+5.0 V/5.0 A			SDS60UD04
63.0 W	+3.3 V/6.0 A	+12.0 V/3.0 A	-12.0 V/0.8 A		SDS60UT00
63.0 W	+3.3 V/6.0 A	+12.0 V/3.0 A	-5.0 V/0.8 A		SDS60UT01
63.0 W	+3.3 V/6.0 A	+12.0 V/3.0 A	+5.0 V/0.8 A		SDS60UT02
53.5 W	+3.3 V/5.0 A	+5.0 V/5.0 A	+12.0 V/1.0 A		SDS60UT03
53.5 W	+3.3 V/5.0 A	+5.0 V/5.0 A	-12.0 V/1.0 A		SDS60UT04
63.0 W	+5.0 V/6.0 A	+12.0 V/3.0 A	-12.0 V/0.8 A		SDS60UT05
63.0 W	+5.0 V/6.0 A	+12.0 V/3.0 A	-5.0 V/0.8 A		SDS60UT06
63.0 W	+5.0 V/6.0 A	+15.0 V/3.0 A	-15.0 V/0.8 A		SDS60UT07
63.0 W	+5.0 V/6.0 A	+24.0 V/2.0 A	-24.0 V/0.5 A		SDS60UT08
63.0 W	+5.0 V/6.0 A	+24.0 V/2.0 A	-12.0 V/0.8 A		SDS60UT09
63.0 W	+5.0 V/6.0 A	+24.0 V/2.0 A	+12.0 V/0.8 A		SDS60UT10
63.0 W	+3.3 V/6.0 A	+12.0 V/3.0 A	-12.0 V/0.8 A	-5.0 V/0.8 A	SDS60UQ00
63.0 W	+3.3 V/6.0 A	+12.0 V/3.0 A	-12.0 V/0.8 A	+5.0 V/0.8 A	SDS60UQ01
63.0 W	+5.0 V/6.0 A	+12.0 V/3.0 A	-12.0 V/0.8 A	-5.0 V/0.8 A	SDS60UQ02
63.0 W	+5.0 V/6.0 A	+12.0 V/3.0 A	-12.0 V/0.8 A	+24.0 V/0.8 A	SDS60UQ03
63.0 W	+5.0 V/6.0 A	+12.0 V/3.0 A	-12.0 V/0.8 A	-24.0 V/0.8 A	SDS60UQ04
63.0 W	+5.0 V/6.0 A	+15.0 V/3.0 A	-15.0 V/0.8 A	-5.0 V/0.8 A	SDS60UQ05
59.3 W	+5.0 V/6.0 A	+24.0 V/1.8 A	-15.0 V/0.1 A	+12.0 V/0.8 A	SDS60UQ06

Notes

1. If an output voltage within the factory-set voltage range is required, a model number will be allocated at the time of order.
2. 10% minimum load required on V1 & V2 of multi-output units to maintain regulation of ±5%. Regulation increases to ±10% with no load.
3. Other output combinations are available - contact sales for more information.
4. On multi-output units V2 tracks V1, if V1 is adjusted by 5%, V2 changes by 5%.
5. For optional U-bracket, add suffix 'B' to model number.
6. For optional 2 pin AC input, contact sales for details.
7. To receive unit with cover fitted, add suffix '-C' to model number.

Mechanical Details



PIN CONNECTIONS				
Pin	Single Output	Dual Output	Triple Output	Quad Output
1	Output 1	Output 2	Output 2	Output 2
2	Output 1	Output 1	Output 1	Output 1
3	Output 1	Output 1	Output 1	Output 1
4	Return	Common	Common	Common
5	Return	Common	Common	Common
6	Return	N/C	Output 3	Output 3
7				Output 4
8				Output 4

Notes

1. All dimensions are in inches (mm)
2. Weight: 0.52 lbs (240 g) approx
3. Tolerance: ±0.02 (0.5)
4. Input connector mates with Molex housing 09-50-3051 and Molex 2878 series crimp terminal.
5. Output connector mates with Molex housing 09-50-3061 or 9-50-3081 and Molex 2878 series crimp terminal.
6. For optional cover kit order part number SDS60 COVER KIT, to receive unit with cover fitted add suffix '-C' to model number. Cover size: 5.46 x 3.55 x 1.55 (140 x 91 x 39.7mm).
7. For mating connectors and cable harness order part numbers:
 - SDS60 CON KIT - Single, dual and triple output models
 - SDS60Q CON KIT - Quad output models
 - SDS60 LOOM KIT - Single output models cable harness
 - SDS60DT LOOM KT - Dual and triple output models cable harness
 - SDS60Q LOOM KIT - Quad output models cable harness