



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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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



25 Watts

- Regulated Single & Dual Output
- 2:1 Input Range
- 1" x 1" Package
- 1500 VDC Isolation
- Operating Temperature -40 °C to +105 °C
- ITE Safety Approvals
- Remote On/Off
- High Power Density
- Optional Heatsink
- Six-sided Metal Case
- 3 Year Warranty



Dimensions:

JSM25:

1.00 x 1.00 x 0.40" (25.4 x 25.4 x 10.16 mm)

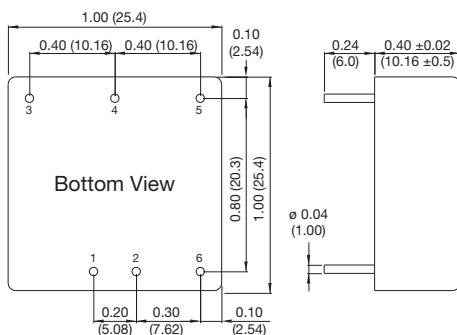
Models & Ratings

Input voltage	Output voltage	Output current	Input current ^(1,2)		Overvoltage Protection	Maximum capacitive load ⁽³⁾	Efficiency	Model number ⁽⁴⁾
			No load	Full load				
9-18V	3V3	6.00 A	75 mA	1.90 A	3.9 V	10300 µF	87%	JSM2512S3V3
	5V	5.00 A	85 mA	2.34 A	6.2 V	6800 µF	89%	JSM2512S05
	12V	2.09 A	80 mA	2.35 A	15.0 V	1200 µF	89%	JSM2512S12
	15V	1.67 A	80 mA	2.35 A	18.0 V	750 µF	89%	JSM2512S15
	±12V	±1.04 A	75 mA	2.34 A	±15.0 V	±680 µF	89%	JSM2512D12
18-36V	±15V	±0.84 A	75 mA	2.36 A	±18.0 V	±380 µF	89%	JSM2512D15
	3V3	6.00 A	55 mA	0.94 A	3.9 V	10300 µF	88%	JSM2524S3V3
	5V	5.00 A	69 mA	1.16 A	6.2 V	6800 µF	90%	JSM2524S05
	12V	2.09 A	55 mA	1.16 A	15.0 V	1200 µF	90%	JSM2524S12
	15V	1.67 A	55 mA	1.16 A	18.0 V	750 µF	90%	JSM2524S15
36-75V	±12V	±1.04 A	50 mA	1.17 A	±15.0 V	±680 µF	89%	JSM2524D12
	±15V	±0.84 A	50 mA	1.18 A	±18.0 V	±380 µF	89%	JSM2524D15
	3V3	6.00 A	35 mA	0.47 A	3.9 V	10300 µF	88%	JSM2548S3V3
	5V	5.00 A	40 mA	0.58 A	6.2 V	6800 µF	90%	JSM2548S05
	12V	2.09 A	35 mA	0.58 A	15.0 V	1200 µF	90%	JSM2548S12
36-75V	15V	1.67 A	35 mA	0.58 A	18.0 V	750 µF	90%	JSM2548S15
	±12V	±1.04 A	40 mA	0.59 A	±15.0 V	±680 µF	89%	JSM2548D12
	±15V	±0.84 A	40 mA	0.59 A	±18.0 V	±380 µF	89%	JSM2548D15

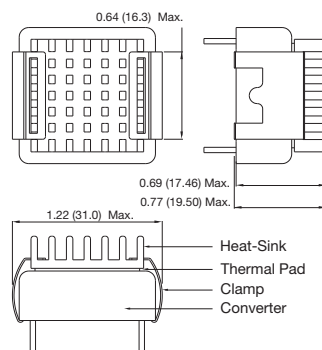
Notes

1. Input currents measured at nominal input voltage.
2. Input current is typically 3 mA at nominal input voltage when output is turned off with remote on/off.
3. Maximum capacitive load is per output.
4. Add suffix "-HK" for optional heatsink.

Mechanical Details



Optional Heatsink (-HK)



Pin Connections		
Pin	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
3	+Vout	+Vout
4	Trim	Common
5	-Vout	-Vout
6	Remote On/Off	Remote On/Off

Notes

1. All dimensions are in inches (mm)
2. Weight: 0.04 lbs (16.5g) approx.
3. Tolerance: X.XX±0.01 (X.X±0.25)
X.XXX±0.005 (X.XX±0.13)
4. Pin Tolerance: ±0.002 (±0.05)

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage Range	9.0		18	VDC	12 V nominal
	18.0		36	VDC	24 V nominal
	36.0		75	VDC	48 V nominal
Input Filter	Internal Pi type				
Input Surge			25	VDC for 1 s	12 V models
			50		24 V models
			100		48 V models
Remote On/Off	ON: Logic high (3.5-12 V) or open circuit OFF: Logic low (<1.2 V) or short pin 2 to pin 6				

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage	3.3		30	VDC	See Models and Ratings table
Initial Set Accuracy			±1.0	%	At full load
Output Trim			±10	%	See Application Notes
Output Voltage Balance			±2.0	%	For dual output with balanced loads
Minimum Load				A	No minimum load required
Line Regulation		±0.2	±0.8	%	From minimum to maximum input at full load
Load Regulation			±0.2/±1.0	%	Single / Dual output, from 0 to full load
Cross Regulation			±5.0	%	On dual output models when one load is varied between 25% and 100% and other is fixed at 100%
Transient Response		3	5	% deviation	Recovery within 1% in less than 300 µs for a 25% load change.
Ripple & Noise			100/150	mV pk-pk	3.3 & 5V output / other models. 20 MHz bandwidth. Measured using 0.47 µF ceramic capacitor.
Overload Protection		150		%	
Short Circuit Protection					Continuous Trip & Restart (Hiccup mode), with auto recovery
Maximum Capacitive Load					See Models and Ratings table
Temperature Coefficient			0.02	%/°C	

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency		89		%	See Models and Ratings table
Isolation: Input to Output	1500/1800			VDC	60 s/1 s
Isolation Resistance	10 ⁹			Ω	At 500 VDC
Isolation Capacitance			2000	pF	
Switching Frequency		285		kHz	
Power Density			62.5	W/in ³	
Mean Time Between Failure		310		kHrs	MIL-HDBK-217F, +25 °C GB
Weight		0.04 (16.5)		lb (g)	

Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating Temperature	-40		+105	°C	See Derating Curve.
Storage Temperature	-50		+125	°C	
Case Temperature			+105	°C	
Humidity			95	%RH	Non-condensing
Cooling					Natural convection
Thermal Impedance to Air			17.6/14.8	°C/W	No heatsink / with heatsink

EMC: Emissions

Phenomenon	Standard	Test Level	Notes & Conditions
Conducted	EN55022	Class A/B	See Application Notes

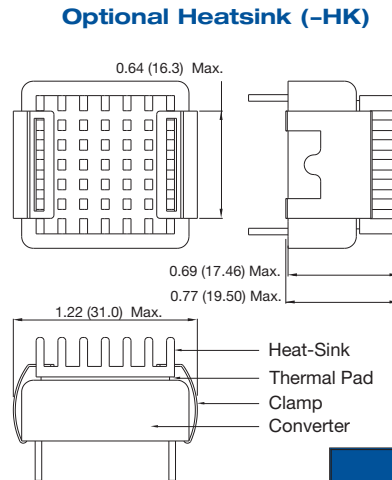
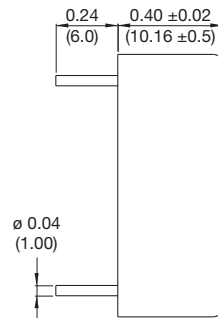
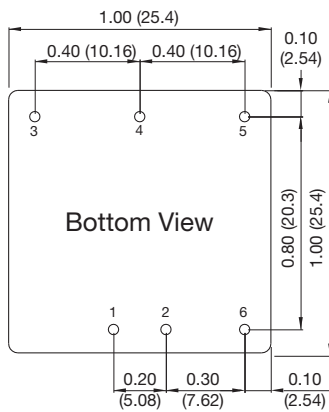
EMC: Immunity

Phenomenon	Standard	Test Level	Criteria	Notes & Conditions
ESD	EN61000-4-2	±8 kV air discharge, ±6 kV contact	A	
Radiated	EN61000-4-3	10 V/m	A	
EFT/Burst	EN61000-4-4	±2 kV	A	With external capacitor, suggested part is CHEMI-CON KY 220µF/100V
Surge	EN61000-4-5	±1 kV	A	With external capacitor, suggested part is CHEMI-CON KY 220µF/100V
Conducted	EN61000-4-6	10 V rms	A	

Safety Approvals

Safety Agency	Safety Standard	Notes & Conditions
CB Report	IEC60950-1	Information Technology
UL	UL/cUL60950-1	Information Technology

Mechanical Details



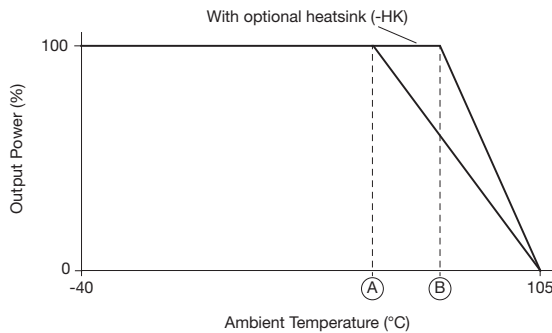
Notes

- All dimensions are in inches (mm)
- Weight: 0.04 lbs (16.5g) approx.
- Tolerance: X.XX±0.01 (X.X±0.25)
X.XXX±0.005 (X.XX±0.13)
- Pin Tolerance: ±0.002 (±0.05)

Pin Connections		
Pin	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
3	+Vout	+Vout
4	Trim	Common
5	-Vout	-Vout
6	Remote On/Off	Remote On/Off

Application Notes

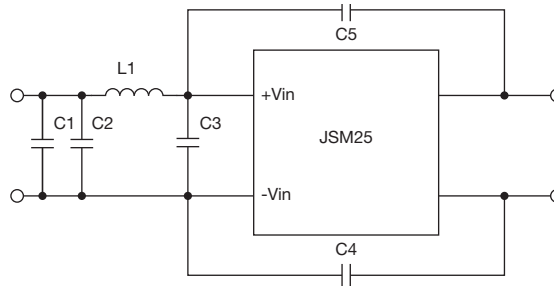
Derating Curve



Models - JSM25	Max Ambient Temperature	
	No Heatsink (A)	With Heatsink (B)
24S3V3, 48S3V3	57°C	65°C
24S05, 24S12, 24S15, 48S05, 48S12, 48S15	56°C	64°C
12S3V3	53°C	61°C
12S05, 12S12, 12S15, 12D12, 12D15, 24D12, 24D15, 48D12, 48D15	50°C	59°C

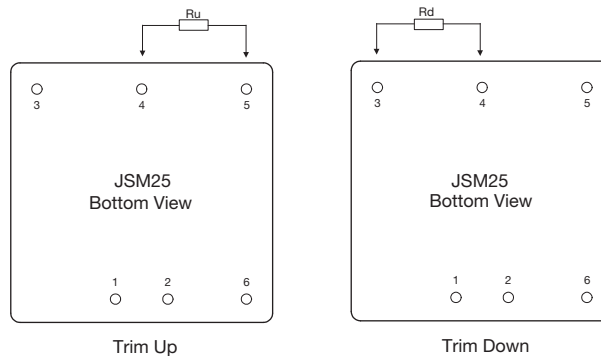
Application Notes

EMI Filter for Conducted Emissions



Class	Model	C1	C2	C3	C4 & C5	L1
Class A	12V	None	3.3µF/25V 1210 MLCC	None	None	1µH
	24V		3.3µF/50V 1210 MLCC			2.2µH
	48V		3.3µF/100V 1210 MLCC			4.7µH
Class B	12V	3.3µF/25V 1210 MLCC	3.3µF/25V 1210 MLCC	3.3µF/25V 1210 MLCC	1800 pF/2kV 1206 MLCC	1µH
	24V	3.3µF/50V 1210 MLCC	3.3µF/50V 1210 MLCC	3.3µF/50V 1210 MLCC	1800 pF/2kV 1206 MLCC	2.2µH
	48V	3.3µF/100V 1210 MLCC	3.3µF/100V 1210 MLCC	3.3µF/100V 1210 MLCC	1800 pF/2kV 1206 MLCC	4.7µH

External Output Trimming



Trim Down Resistor Values (Rd)

Models	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
	Voutx0.99	Voutx0.98	Voutx0.97	Voutx0.96	Voutx0.95	Voutx0.94	Voutx0.93	Voutx0.92	Voutx0.91	Voutx0.90
3V3	72.61 k	32.55 k	19.20 k	12.52 k	8.51 k	5.84 k	3.94 k	2.51 k	1.39 k	0.50 k
5V	138.88 k	62.41 k	36.92 k	24.18 k	16.53 k	11.44 k	7.79 k	5.06 k	2.94 k	1.24 k
12V	413.55 k	184.55 k	108.22 k	70.05 k	47.15 k	31.88 k	20.98 k	12.80 k	6.44 k	1.35 k
15V	530.73 k	238.61 k	141.24 k	92.56 k	63.35 k	43.87 k	29.96 k	19.53 k	11.41 k	4.92 k

Trim Up Resistor Values (Ru)

Models	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
	Voutx1.01	Voutx1.02	Voutx1.03	Voutx1.04	Voutx1.05	Voutx1.06	Voutx1.07	Voutx1.08	Voutx1.09	Voutx1.10
3V3	60.84 k	27.40 k	16.25 k	10.68 k	7.34 k	5.11 k	3.51 k	2.32 k	1.39 k	0.65 k
5V	106.87 k	47.76 k	28.06 k	18.21 k	12.30 k	8.36 k	5.55 k	3.44 k	1.79 k	0.48 k
12V	351.00 k	157.50 k	93.00 k	60.75 k	41.40 k	28.50 k	19.29 k	12.37 k	7.00 k	2.70 k
15V	422.77 k	189.89 k	112.26 k	73.44 k	50.15 k	34.63 k	23.54 k	15.22 k	8.75 k	3.58 k