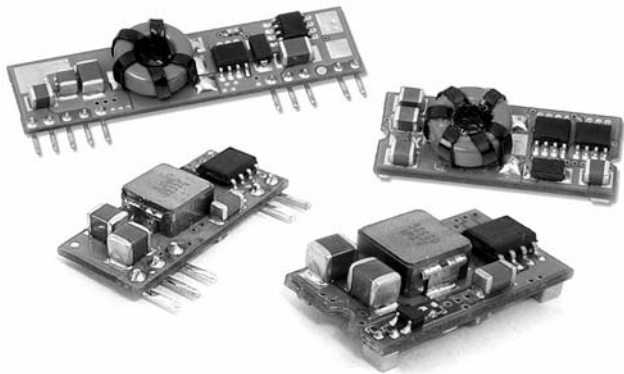


JAZ Series



- Industry Standard Pin-out
- 0.75 - 5.5 VDC Adjustable Output Versions
- No Minimum Load Required
- Continuous Short Circuit Protection
- Input Range from 3-5.5 VDC and 9-14 VDC
- UL60950 Approval
- SIP and SMT Versions Available

Specification

Input

Input Voltage Range	<ul style="list-style-type: none"> • 5 V: 3 - 5.5VDC • 12 V: 9 - 14 VDC
Input Current	<ul style="list-style-type: none"> • See tables
Undervoltage Lockout Protection	<ul style="list-style-type: none"> • 5 V: Turn ON > 2.8 V typical Turn OFF > 2.7 V typical • 12 V: Turn ON > 8.5 V typical Turn OFF > 8.0 V typical (see note 2)
Input Filter	<ul style="list-style-type: none"> • Capacitive

Output

Output Voltage	<ul style="list-style-type: none"> • See tables
Output Voltage Trim	<ul style="list-style-type: none"> • 0.75 - 5.5 V, output is set by R Trim - see output configuration table
Minimum Load	<ul style="list-style-type: none"> • No minimum load requirements
Line Regulation	<ul style="list-style-type: none"> • $\pm 0.2\%$
Load Regulation	<ul style="list-style-type: none"> • $\pm 0.5\%$
Setpoint Accuracy	<ul style="list-style-type: none"> • $\pm 1.5\%$
Transient Response	<ul style="list-style-type: none"> • Recovery to within 1% of nominal output voltage in 200 μS after a 25% load change
Ripple & Noise	<ul style="list-style-type: none"> • JAZ05/10/15: 20 mVrms, 50 mV pk-pk • JAZ05 5 V: 45 mVrms, 75 mV pk-pk • JAZ16: 30 mVrms, 75 mV pk-pk
Temperature Coefficient	<ul style="list-style-type: none"> • 0.03% /$^{\circ}$C
Short Circuit Protection	<ul style="list-style-type: none"> • Continuous
Overtemperature Protection	<ul style="list-style-type: none"> • JAZ5/10/15: 120 $^{\circ}$C typical • JAZ16: 130 $^{\circ}$C typical (measured internally on all units)
Remote On/Off	<ul style="list-style-type: none"> • On = Open circuit or $\geq V_{in}$ • Off = < 0.4 V • For negative logic 'L' option: On = Open circuit or < 0.4 V • Off = 2.8 V < V < V_{in}

General

Efficiency	<ul style="list-style-type: none"> • See tables
Isolation Voltage	<ul style="list-style-type: none"> • Non-isolated
Switching Frequency	<ul style="list-style-type: none"> • 300 kHz typical
Packaging Style	<ul style="list-style-type: none"> • SIP or SMT
MTBF	<ul style="list-style-type: none"> • JAZ05: 1500 kHrs • JAZ10: 1450 kHrs • JAZ15: 1370 kHrs • JAZ16: 1300 kHrs

Environmental

Operating Temperature	<ul style="list-style-type: none"> • -40 $^{\circ}$C to +85 $^{\circ}$C, see derating curves
Cooling	<ul style="list-style-type: none"> • Convection or force-cooled
Storage Temperature	<ul style="list-style-type: none"> • -55 $^{\circ}$C to +125 $^{\circ}$C

EMC & Safety

Safety Approvals	<ul style="list-style-type: none"> • UL60950
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Models and Ratings

Input Voltage	Output Voltage	Output Current	R Trim (kOhms)	Input Current		Efficiency	Model Number ^{1,2,3}
				No Load	Full Load		
8.3 - 14.0 VDC	0.75 V	5 A	Open	20 mA	428 mA	73%	JAZ05-12S05
	1.20 V	5 A	22.33	25 mA	625 mA	80%	
	1.50 V	5 A	13.00	25 mA	762 mA	82%	
	1.80 V	5 A	9.00	30 mA	893 mA	84%	
	2.00 V	5 A	7.40	30 mA	890 mA	85%	
	2.50 V	5 A	5.00	35 mA	1197 mA	87%	
	3.30 V	5 A	3.12	45 mA	1545 mA	89%	
5.00 V	5 A	1.47	50 mA	2264 mA	92%		

Notes

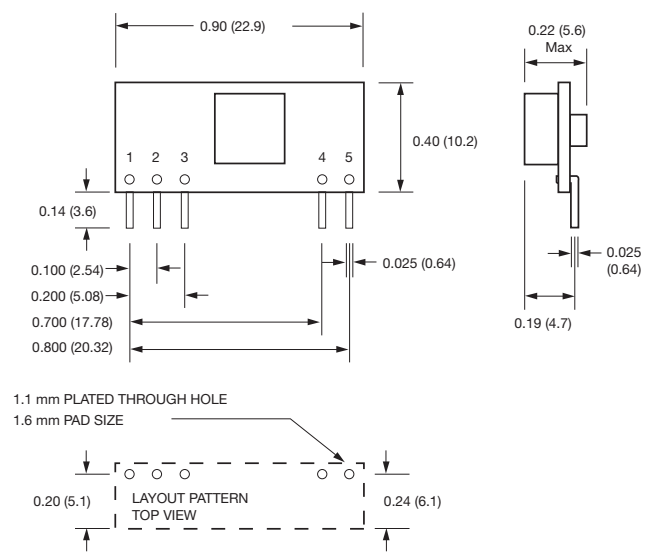
1. Add suffix 'S' for SMT versions.
2. The undervoltage lockout protection for the JAZ05-12S05 is turn on > 8.0 V and turn off < 7.9 V.
3. For negative logic remote turn on/off add suffix '-L' to part number.

Mechanical Details

All dimensions are in inches (mm)

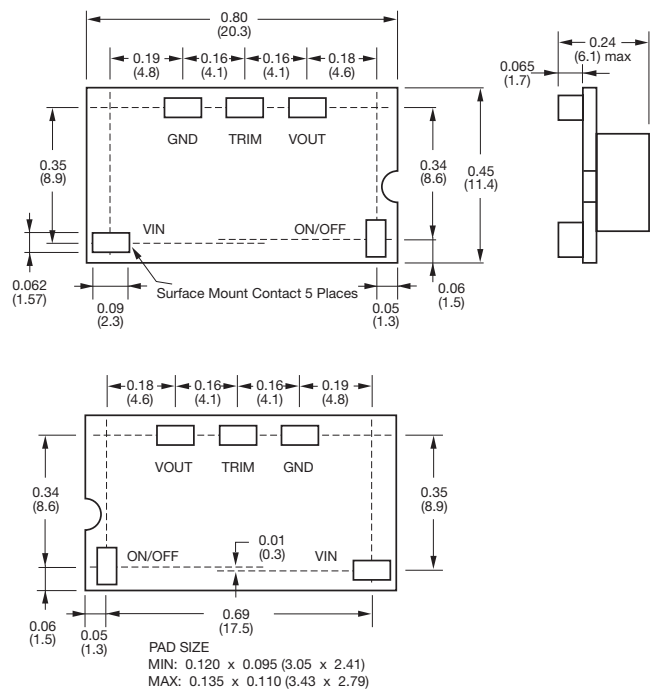
Tolerances: x.xx = ±0.02 (±0.50) unless otherwise stated
 x.xxx = ±0.01 (±0.25)

Standard Version



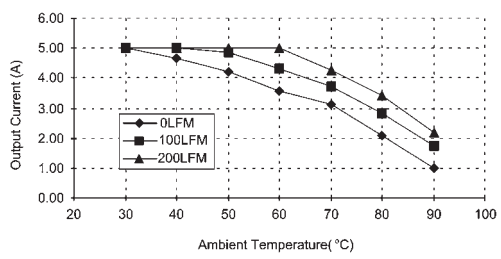
PIN CONNECTIONS					
Pin	1	2	3	4	5
Function	+ Output	Trim	Common	+ V Input	On/Off

SMT Version

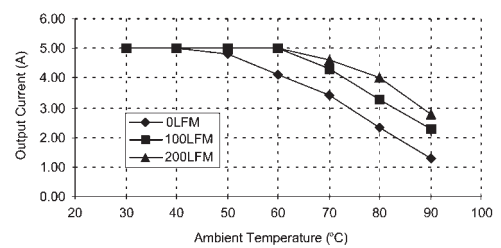


Derating Curves

Standard Version
 Derating Curve for 3.3 VDC Output



SMT Version
 Derating Curve for 3.3 VDC Output



Models and Ratings

Input Voltage	Output Voltage	Output Current	Input Current		Efficiency	Model Number ^(1,2,4)
			No Load	Full Load		
3.0 - 5.5 VDC	1.00 V	10 A	50 mA	2353 mA	85%	JAZ10-05S1V0
	1.20 V	10 A	50 mA	2791 mA	86%	JAZ10-05S1V2
	1.50 V	10 A	50 mA	3409 mA	88%	JAZ10-05S1V5
	1.80 V	10 A	50 mA	4000 mA	90%	JAZ10-05S1V8
	2.00 V	10 A	60 mA	4396 mA	91%	JAZ10-05S2V0
	2.50 V	10 A	60 mA	5376 mA	93%	JAZ10-05S2V5
	3.30 V	10 A	60 mA	6947 mA	95%	JAZ10-05S3V3
8.3 - 14.0 VDC	0.75 - 5.00 V	10 A	70 mA	3000 mA	93% at 3.3 V	JAZ10-12S05T ⁽³⁾
9.0 - 14.0 VDC	1.0 V	10 A	50 mA	992 mA	84%	JAZ10-12S1V0
	1.2 V	10 A	50 mA	1160 mA	86%	JAZ10-12S1V2
	1.5 V	10 A	50 mA	1400 mA	89%	JAZ10-12S1V5
	1.8 V	10 A	50 mA	1670 mA	90%	JAZ10-12S1V8
	2.5 V	10 A	50 mA	2260 mA	92%	JAZ10-12S2V5
	3.3 V	10 A	70 mA	2960 mA	93%	JAZ10-12S3V3
	5.0 V	10 A	70 mA	4390 mA	95%	JAZ10-12S05
3.0 - 5.5 VDC	0.9 - 2.5 V	15 A	70 mA	8152 mA	92% at 2.5 V	JAZ15-05S3V3 ⁽³⁾
4.5 - 5.5 VDC	3.3 V	15 A	70 mA	10532 mA	94% at 3.3 V	
9.0 - 14.0 VDC	0.75 - 5.00 V	16 A	75 mA	4783 mA	92% at 3.3 V	JAZ16-12S05 ⁽³⁾

Notes

1. Add suffix 'S' for SMT versions.
2. The undervoltage lockout protection for the JAZ10-12S05T is turn on > 8.0 V and turn off < 7.9 V.
3. See Output Configuration Table below for values of trim resistors for specific output voltages.
4. For negative logic remote turn on/off add suffix '-L' to part number.

Output Configuration Table

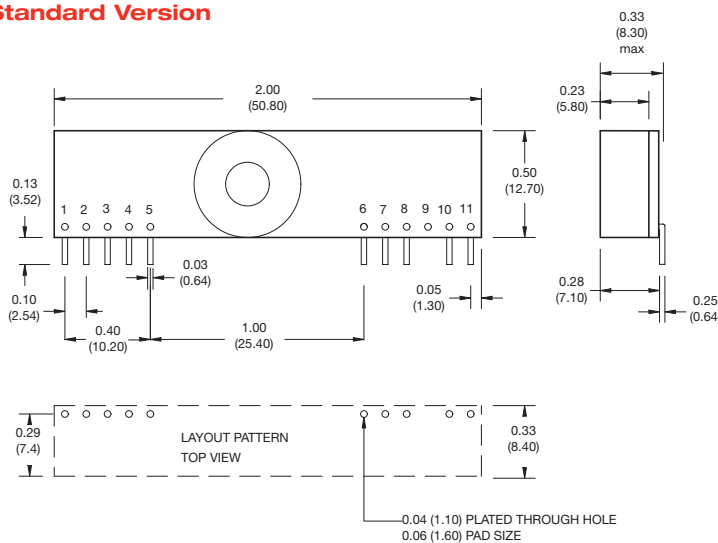
Output Voltage	JAZ05-12S05 R Trim (kOhm)	JAZ10-12S05T R Trim (kOhm)	JAZ15-05S3V3 R Trim (kOhm)	JAZ16-12S05 R Trim (kOhm)
0.75 V	Open	Open		Open
0.90 V			135.36	
1.20 V	22.33	22.30	41.70	22.30
1.50 V	13.00	13.00	23.00	13.00
1.80 V	9.00	9.00	15.00	9.00
2.00 V	7.40			
2.50 V	5.00	5.00	7.00	5.00
3.30 V	3.12	3.12	3.20	3.12
5.00 V	1.47	1.47		1.47

Mechanical Details

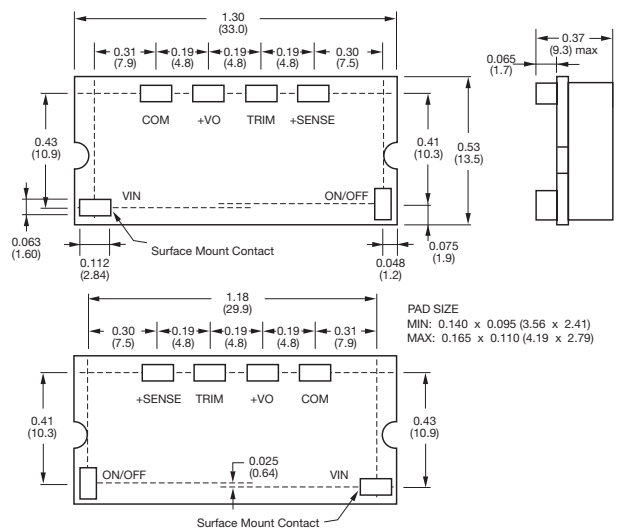
All dimensions are in inches (mm)

Tolerances: x.xx = ±0.02 (±0.50) unless otherwise stated, x.xxx = ±0.01 (±0.25)

Standard Version



SMT Version

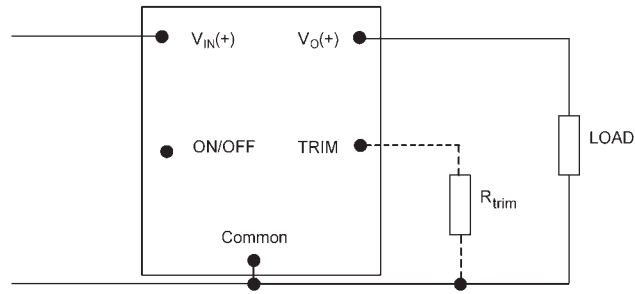


PIN CONNECTIONS

Pin	1	2	3	4	5	6	7	8	9	10	11
Function	+ Output	+ Output	+ Sense	+ Output	Common	Common	+ V input	+ V input	No pin	Trim	On/Off Control

JAZ05/10/15/16

Circuit configuration for programming output voltage using an external resistor.



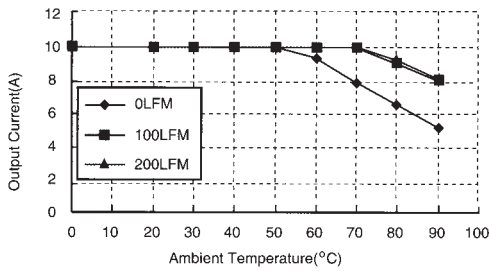
Derating Curves

Standard Version

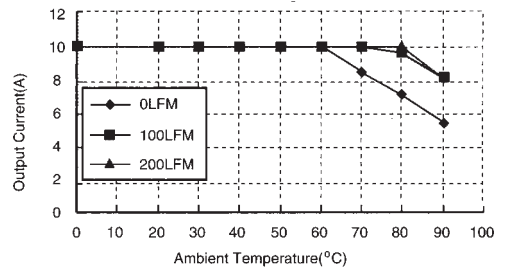
SMT Version

JAZ10

Derating Curve for 5.0 VDC Input

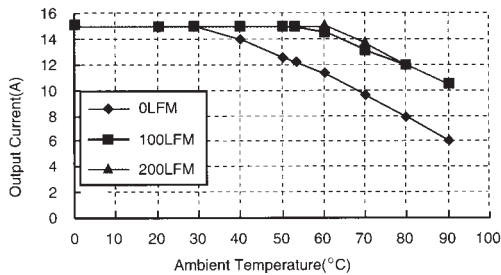


Derating Curve for 5.0 VDC Input

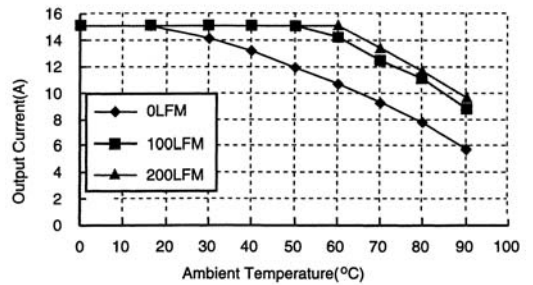


JAZ15

Derating Curve for 5.0 VDC Input

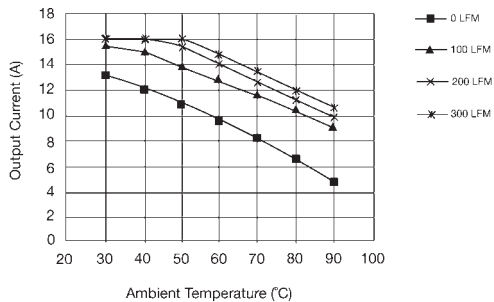


Derating Curve for 5.0 VDC Input



JAZ16

Derating Curve for 12.0 VDC Input



Derating Curve for 12.0 VDC Input

