

DC-DC Switching Regulator

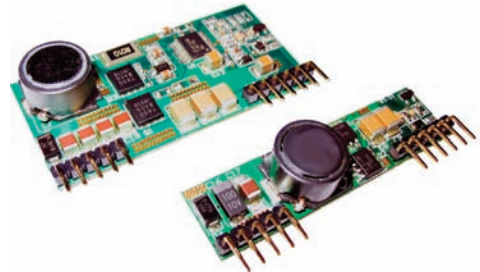
**POWER
SOLVE**

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PSR30 & PSR60 Series Non-Isolated up to 60 Watts

Features

- Wide 20-53V or 30-53V DC Input
- 5V, 12V, 15V or 24V DC Output
- Compact Open PCB SIL Package
- High Efficiencies up to 96%
- 250kHz Switching Frequency
- Ideal for Battery or Distributed Power Applications
- RoHS Compliant



Electrical Specification

Input Specification

Input Voltage Range: 20-53V DC 5V to 15V output, 30-53V DC 24V output

Input Filter: Capacitive

Input Protection: External fuse recommended, see Technical Notes

Remote On/Off Control: See Technical Notes

Output Specification:

Voltage Setpoint Accuracy: $\pm 2\%$ max

Ripple & Noise (20MHz Band Width): 5V 100mV pk-pk, others 1% pk-pk max

Line Regulation: $\pm 0.5\%$ max low line to high line

Load Regulation: $\pm 0.5\%$ max 10-100% load

Temperature Coefficient: $\pm 0.05\%/^{\circ}\text{C}$

Short Circuit Protection: Continuous

Overload Protection: 120-220% Typical

General Specification:

Efficiency: 90% minimum, see table for specific models

Switching Frequency: 200KHz typical

Isolation Voltage: Non isolated

Weight: PSR30 7.5 grams typical, PSR60 12 grams typical

Dimensions: PSR30 50.8x13x10.7mm, PSR60 50.8x26x10.7mm

Environmental Specifications

Operating Ambient Temperature: -25° to $+65^{\circ}\text{C}$ see derating curve

Storage Temperature: -55°C to $+125^{\circ}\text{C}$

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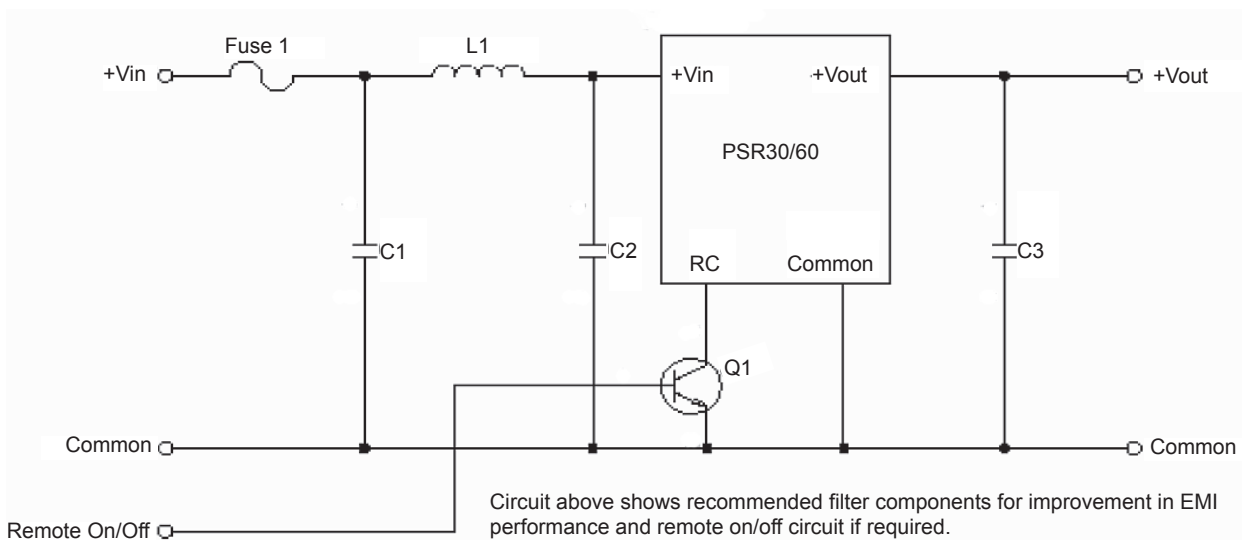
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Voltage & Current Ratings

Model	DC Input	DC Output	Output Current	Input Current		Efficiency	Package
				No Load	Full Load		
PSR30-05	20 to 53V	5V	2.50A	15mA	580mA	91%	A
PSR30-12	20 to 53V	12V	2.50A	14mA	1320mA	96%	A
PSR30-15	20 to 53V	15V	2.00A	15mA	1300mA	96%	A
PSR30-24	30 to 53V	24V	1.25A	30mA	700mA	94%	A
PSR60-05	20 to 53V	5V	4.00A	15mA	935mA	90%	B
PSR60-12	20 to 53V	12V	4.00A	20mA	2110mA	95%	B
PSR60-15	20 to 53V	15V	4.00A	20mA	2590mA	96%	B
PSR60-24	30 to 53V	24V	2.5A	30mA	1320mA	95%	B

Other output voltages available, consult sales office for details

Technical Notes



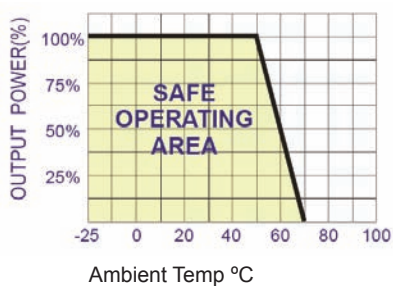
Circuit Reference

Recommended Components

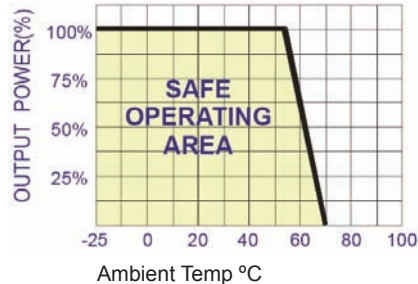
Fuse 1	3A Slow Blow for PSR30 Series or 5A Slow Blow for PSR60 Series
L1	SCD0503 2.2μH
C1	22μF 100V Chemicon KMF Series
C2	22μF 100V Chemicon KMF Series
C3	100μF 25V Chemicon KY Series
Q1	Open Circuit: Logic High = DC-DC Converter ON, <0.4V Logic Low = DC-DC Converter OFF

Derating Curves

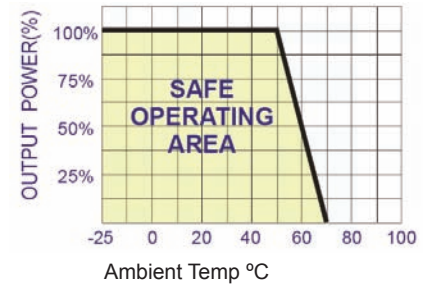
PSR30-05



PSR30-12, -15, -24



PSR60 Series



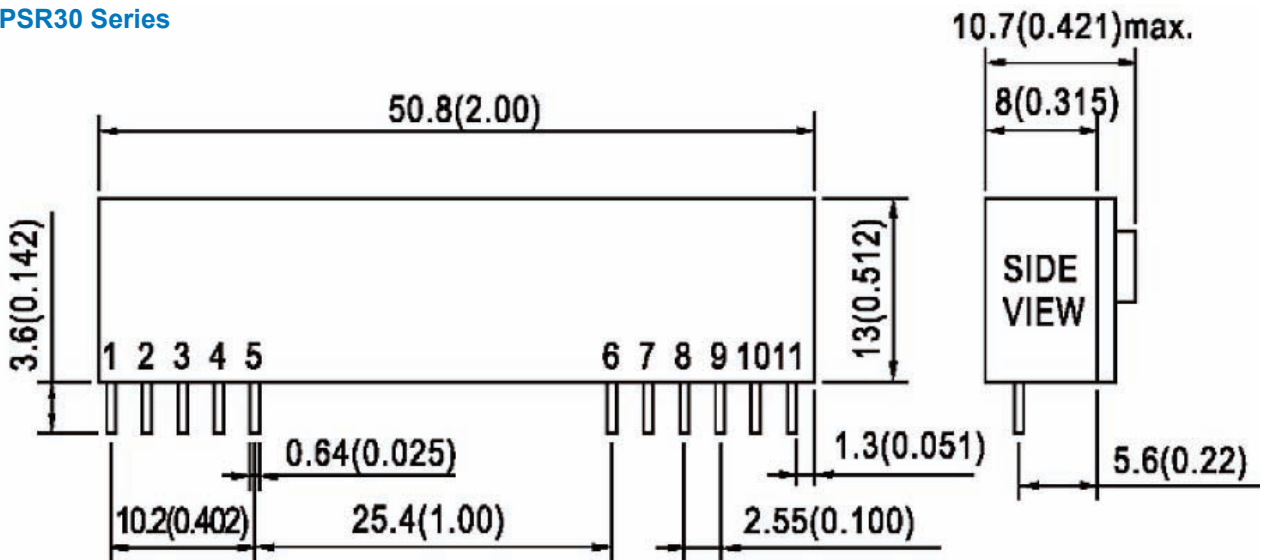
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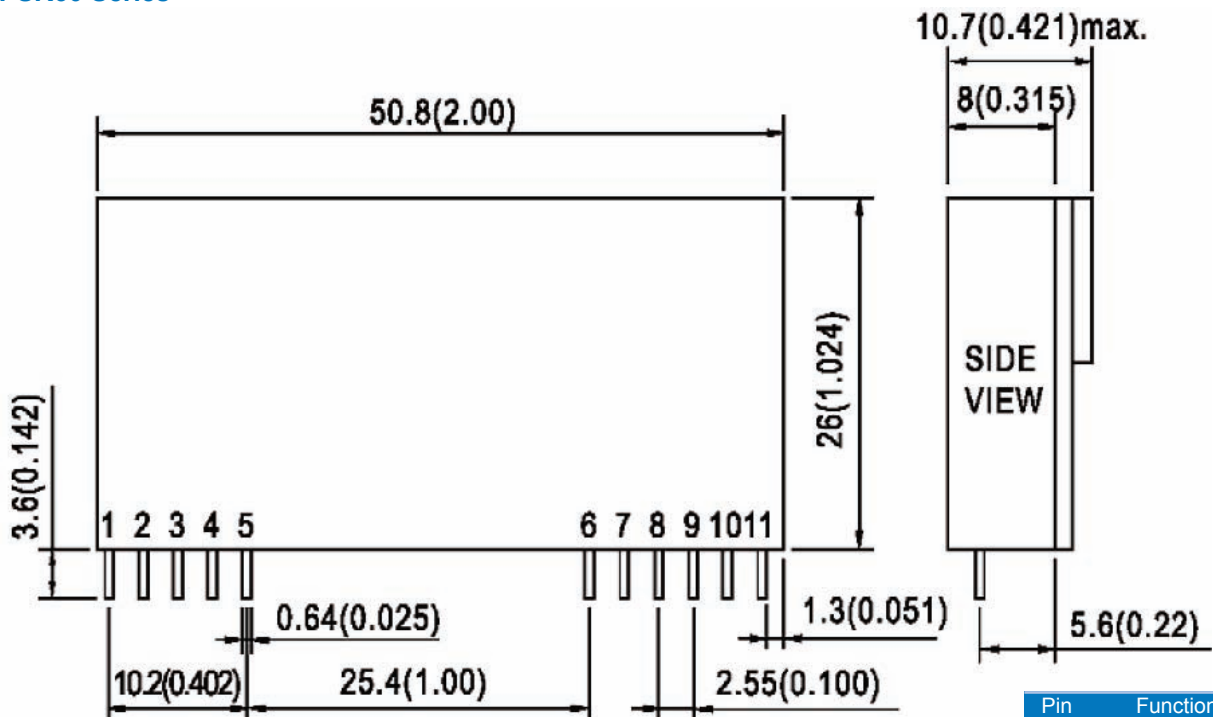
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Mechanical Details

PSR30 Series



PSR60 Series



Pin	Function
1	+Vout
2	+Vout
3	+Vout
4	+Vout
5	Common
6	Common
7	+Vin
8	+Vin
9	NC
10	NC
11	Remote On/OFF

All dimensions in mm (inches). Tolerance ± 0.5 mm

For PCB mounting we recommend 1.1mm plated through hole with 1.6mm pad size.