

# DC/DC Converters – S5 –S/D2

2 WATT (available also 1WATT series)  
Single / Dual Output

## FEATURES

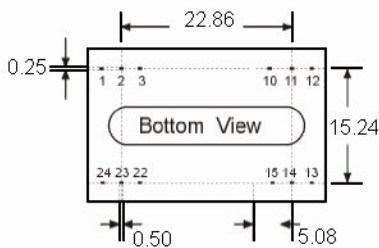
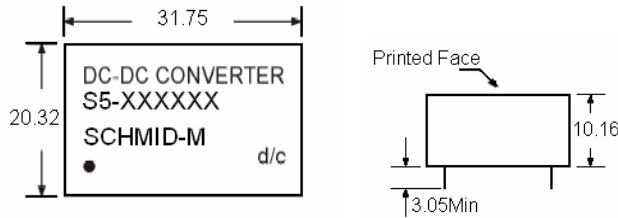
- 24 Pin DIL Package
- Regulated
- 1000 Vdc Isolation (3000 Vdc Isolation available)
- Continuous Short Circuit Protection
- Plastic Case Standard, Optional metal case – suffix M
- Full SMD technology

<b>Input specifications:</b>	
Filter:	$\pi$ (Pi) type
Voltage Range	$\pm 10\%$
<b>Isolation specification:</b>	
Rated Voltage	1000 Vdc, Standard
Resistance	1000 M $\Omega$
Capacitance	60 pF, Typ.
<b>Output specifications:</b>	
Voltage accuracy	$\pm 2\%$ , Max
Ripple & noise (at 20MHz BW)	75 mVpk-pk
Short Circuit Protection	Indefinite
Line regulation	$\pm 5.0\%$ , Max
Load regulation	$\pm 5.0\%$ , Max
Temperature coefficient	$\pm 0.02\%/^{\circ}\text{C}$
<b>General Specifications:</b>	
Efficiency	Up to 80%
Switching Frequency	40 kHz, Typ.
<b>Environmental specifications:</b>	
Operating Temperature	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
Case temperature	100 $^{\circ}\text{C}$ Max.
Storage Temperature	$-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
Humidity	95%
Cooling	Nature Convection

Notes:  
Suffix „H“ means 3KVdc isolation, „M“ means Metal Case

Model Number	Input Vdc	Output Vdc	Output Current (mA)	Efficiency @FL (%)
S5-053R3S2	5	3.3	500	53
S5-0505S2		5	400	65
S5-0509S2		9	222	67
S5-0512S2		12	166	70
S5-0515S2		15	133	68
S5-0524S2	24	83,3	65	
S5-053R3D2-R	5	$\pm 3.3$	$\pm 300$	62
S5-0505D2-R		$\pm 5$	$\pm 200$	68
S5-0509D2-R		$\pm 9$	$\pm 111$	70
S5-0512D2-R		$\pm 12$	$\pm 83$	70
S5-0515D2-R		$\pm 15$	$\pm 67$	70
S5-0524D2-R	$\pm 24$	$\pm 42$	69	
S5-123R3S2	12	3.3	500	56
S5-1205S2		5	400	64
S5-1209S2		9	222	68
S5-1212S2		12	166	70
S5-1215S2		15	133	66
S5-1224S2	24	83,3	65	
S5-123R3D2-R	12	$\pm 3.3$	$\pm 300$	66
S5-1205D2-R		$\pm 5$	$\pm 200$	73
S5-1209D2-R		$\pm 9$	$\pm 111$	75
S5-1212D2-R		$\pm 12$	$\pm 83$	78
S5-1215D2-R		$\pm 15$	$\pm 67$	77
S5-1224D2-R	$\pm 24$	$\pm 42$	76	
S5-243R3S2	24	3.3	500	57
S5-2405S2		5	400	63
S5-2409S2		9	222	63
S5-2412S2		12	166	68
S5-2415S2		15	133	68
S5-2424S2	24	83,3	68	
S5-243R3D2-R	24	$\pm 3.3$	$\pm 300$	68
S5-2405D2-R		$\pm 5$	$\pm 200$	73
S5-2409D2-R		$\pm 9$	$\pm 111$	75
S5-2412D2-R		$\pm 12$	$\pm 83$	80
S5-2415D2-R		$\pm 15$	$\pm 67$	77
S5-2424D2-R	$\pm 24$	$\pm 42$	75	

## MECHANICAL DIMENSIONS & PIN CONNECTIONS



### PIN CONNECTIONS

PIN NUMBER	SINGLE	DUAL	SINGLE-H	DUAL-H
1	+V Input	+V Input	+V Input	+V Input
2	N.C.	-V Output	+V Input	+V Input
3	N.C.	Common	N.P.	N.P.
10	-V Output	Common	N.P.	Common
11	+V Output	+V Output	N.P.	Common
12	-V Input	-V Input	-V Output	N.P.
13	-V Input	-V Input	+V Output	-V Output
14	+V Output	+V Output	N.P.	N.P.
15	-V Output	Common	N.P.	+V Output
22	N.C.	Common	N.P.	N.P.
23	N.C.	-V Output	-V Input	-V Input
24	+V Input	+V Input	-V Input	-V Input

# DC/DC Converters – S5 –S/D3

3 WATT

Single / Dual Output

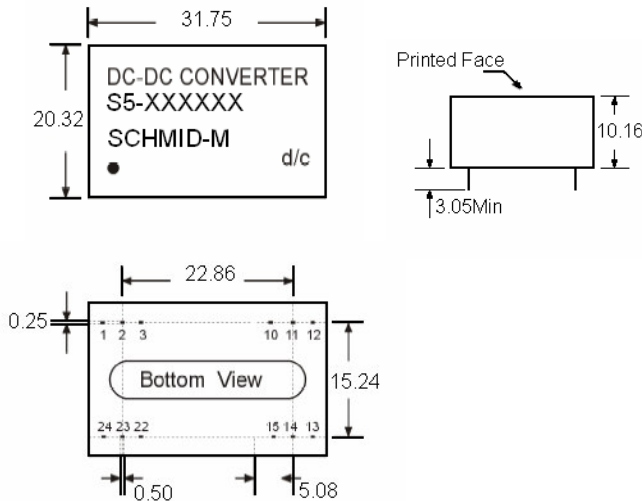
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Case temperature	$100^{\circ}\text{C}$ Max.
Storage Temperature	$-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
Humidity	95%
Cooling	Nature Convection

Model Number	Input Vdc	Output Vdc	Output Current (mA)	Efficiency @FL (%)
S5-053R3S3	5	3.3	600	55
S5-0505S3		5	600	65
S5-0509S3		9	333	68
S5-0512S3		12	250	71
S5-0515S3		15	200	71
S5-0524S3		24	125	64
S5-053R3D3-R	5	$\pm 3.3$	$\pm 400$	64
S5-0505D3-R		$\pm 5$	$\pm 300$	66
S5-0509D3-R		$\pm 9$	$\pm 167$	68
S5-0512D3-R		$\pm 12$	$\pm 125$	70
S5-0515D3-R		$\pm 15$	$\pm 100$	70
S5-0524D3-R		$\pm 24$	$\pm 63$	69
S5-123R3S3	12	3.3	600	58
S5-1205S3		5	600	65
S5-1209S3		9	333	70
S5-1212S3		12	250	71
S5-1215S3		15	200	73
S5-1224S3		24	125	68
S5-123R3D3-R	12	$\pm 3.3$	$\pm 400$	68
S5-1205D3-R		$\pm 5$	$\pm 300$	75
S5-1209D3-R		$\pm 9$	$\pm 167$	78
S5-1212D3-R		$\pm 12$	$\pm 125$	80
S5-1215D3-R		$\pm 15$	$\pm 100$	78
S5-1224D3-R		$\pm 24$	$\pm 63$	76
S5-243R3S3	24	3.3	600	58
S5-2405S3		5	600	65
S5-2409S3		9	333	69
S5-2412S3		12	250	72
S5-2415S3		15	200	72
S5-2424S3		24	125	70
S5-243R3D3-R	24	$\pm 3.3$	$\pm 400$	70
S5-2405D3-R		$\pm 5$	$\pm 300$	77
S5-2409D3-R		$\pm 9$	$\pm 167$	78
S5-2412D3-R		$\pm 12$	$\pm 125$	80
S5-2415D3-R		$\pm 15$	$\pm 100$	78
S5-2424D3-R		$\pm 24$	$\pm 63$	76

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13	-V Input	-V Input	+V Output	-V Output
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