3-S8R-xxxxE2:1B

Mainzer Str. 151-153
D-55299 Nackenheim
+49(0)6135 70260
www.peak-electronics.de

DC/DC Converter

3 WATT Power, SIP 8, Regulated, Single Output, Wide 2:1 Input Voltage Range

- **Operating Temperature: -40 ~ +85 (see Derating curve)**
- **I/O Isolation Voltage: Tested up to 1500 VDC**
- **High efficiency up to 84%**
- **Case Material: Black plastic, flame retardant and heat resistant (UL94-V0)**
- **Short Circuit Protection: Continuous, self-recovery**

Variants: Also available with Dual Output

All specifications typical at Ta=25°C, humidity less than 75%, nominal input voltage and rated output load unless otherwise specified.

Input Specifications

Input Voltage Range	Vdc	see product
Input Current No Load	mA, typ.	see product
Input Current Full Load	mA, typ.	see product
Hot Plug		Unavailable
Input Filter		PI Filter
Input Reflected Ripple Current	mA, typ.	05-Models: 20|Other: 30

Output Specifications

Output Voltage Accuracy	%, typ.	±1 (5-100% load)
Output Voltage	Vdc	see product
Output Current	mA, min.	see product
Output Current	mA, max.	see product
Line Regulation	%, typ.	±0.2
Line Regulation	%, max.	±0.5
Load Regulation (5% to 100%)	%, typ.	±0.6
Ripple and Noise (20 MHz Bandwith)	mV p-p, typ.	see product
Short Circuit Protection		Continuous, self-recovery
Capacitive Load @FL	µF, max.	see product
Transient Recovery Time	ms, typ.	0.5
Transient Response Deviation	%, max.	±5

Ripple and Noise: "paralell cable" is used for ripple and noise test, please refer to PEAK for specific information|

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General Specification

Efficiency @FL	%, typ.	see product
I/O Isolation Voltage(60sec), Input/Output	Vdc	1500
I/O Isolation Capacitance	pF, typ	120 (at 100kHz/0.1V)
I/O Insulation Resistance	M Ohm	1000 (at 500Vdc)
Switching Frequency @FL	kHz, typ	250 (@FL)
Storage Humidity	%, rel H, max.	95% (max., non condensing)
MTBF Reliability Calculated (MIL-HDBK-217F) at 25°C	khrs	>1000
CTR Module ON	Vdc	CTRL pin open (high resistance)
CTR Module OFF	Vdc	CTRL pin pulled high (current 5-10mA typ. Into CTRL)
Operating Temperature	°C	-40 ~ +85 (see Derating curve)
Pin Soldering Resistance Temperature	°C, max.	300
Storage Temperature	°C	-55 ~ +125
Cooling		Free air convection
Case Material		Black plastic, flame retardant and heat resistant (UL94-V0)
Weight	g	4.5
Dimension	mm	22.0 x 9.5 x 12.0
Certification		CE (designed to meet)

I/O Isolation Voltage: Test time of 1 minute and leak current lower than 1mA|

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Special Characteristics

Surge Voltage (1sec.)	Vdc, min.	-0.7
Surge Voltage (1sec.)	Vdc, max.	05 Models: 12|12 Models: 25|24 Models: 50|48 Models: 100
Start-up Voltage	ms, max.	05 Models: 4.5|12 Models: 9|24 Models: 18|48 Models: 36

Product Overview

ARTICLE CODE	Input Voltage Range	Input Current No Load	Input Current Full Load	Output Voltage	Output Current	Output Current	Capacitive Load @FL	Efficiency @FL	Ripple & Noise
	Vdc	mA, typ.	mA, typ.	Vdc	mA, min.	mA, max.	µF, max.	%, typ.	mVp-p, typ.
3-S8R-053R3E2:1B	5 (4.5-9)	40	735	3.3	38	758	1800	68	40
3-S8R-0505E2:1B	5 (4.5-9)	40	805	5	25	500	2200	73	40
3-S8R-0509E2:1B	5 (4.5-9)	40	805	9	14	278	1000	74	40
3-S8R-0512E2:1B	5 (4.5-9)	40	805	12	10	208	680	77	40
3-S8R-0515E2:1B	5 (4.5-9)	40	805	15	8	167	470	74	40
3-S8R-0524E2:1B	5 (4.5-9)	40	805	24	5	104	330	76	40
3-S8R-123R3E2:1B	12 (9-18)	30	278	3.3	38	758	2700	75	40
3-S8R-1205E2:1B	12 (9-18)	30	314	5	30	600	2200	76	40
3-S8R-1206E2:1B	12 (9-18)	30	314	6	25	500	1800	79	40
3-S8R-1209E2:1B	12 (9-18)	30	314	9	17	333	1000	79	40
3-S8R-1212E2:1B	12 (9-18)	30	314	12	13	250	680	82	70
3-S8R-1215E2:1B	12 (9-18)	30	314	15	10	200	470	83	70
3-S8R-1224E2:1B	12 (9-18)	30	314	24	6	125	330	81	100
3-S8R-243R3E2:1B	24 (18-36)	20	140	3.3	38	758	2700	74	40
3-S8R-2405E2:1B	24 (18-36)	20	154	5	30	600	2200	81	40
3-S8R-2409E2:1B	24 (18-36)	20	154	9	17	333	1000	83	40
3-S8R-2412E2:1B	24 (18-36)	20	154	12	13	250	680	83	40
3-S8R-2415E2:1B	24 (18-36)	20	154	15	10	200	470	83	100
3-S8R-2424E2:1B	24 (18-36)	20	154	24	6	125	330	83	100
3-S8R-483R3E2:1B	48 (36-75)	5	69	3.3	38	758	2700	75	100
3-S8R-4805E2:1B	48 (36-75)	5	78	5	30	600	2200	76	100
3-S8R-4812E2:1B	48 (36-75)	5	78	12	13	250	680	80	40
3-S8R-4815E2:1B	48 (36-75)	5	78	15	10	200	470	84	40
3-S8R-4824E2:1B	48 (36-75)	5	78	24	6	125	330	82	70

Variants: Also available with Dual Output

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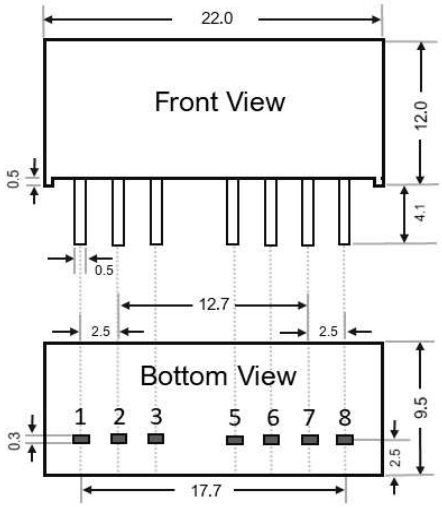
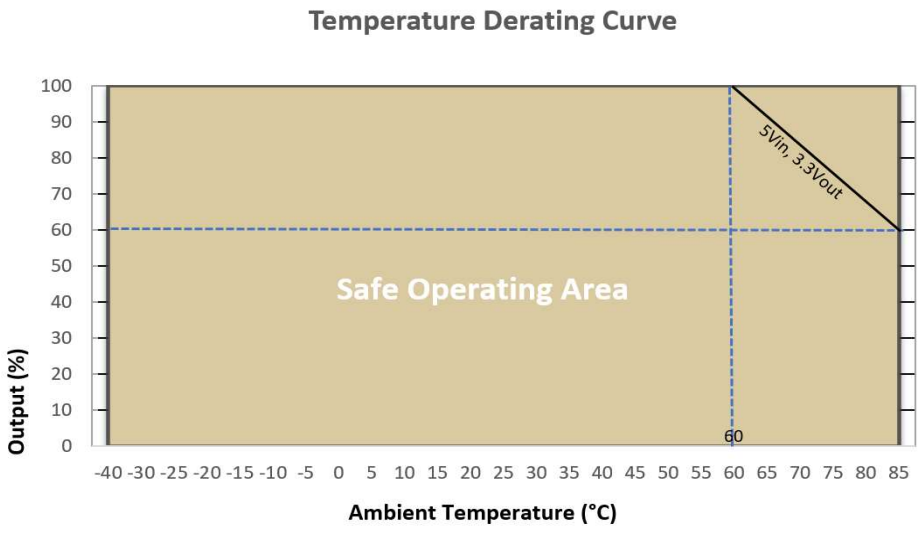
Technical Drawings



All dimensions in millimetres | General tolerances: ±0.5
Specifications may change without notice

PIN Connections	
PIN 01	GND
PIN 02	Vin
PIN 03	CTRL
PIN 05	N.C.
PIN 06	+Vo
PIN 07	0V
PIN 08	CS

Derating Curve



Please Note: Exposure of devices to any of these conditions may adversly affect long-term reliability. Do not operate the devices exceeding the absolute maximum rating, over rating causes damage to the unit(s).

PEAK Application Support: For more information regarding the EMC or other technical requests please feel free to contact our Application Support Team by email peak@peak-electronics.de or phone +49(0)6135-70260.