- **POL-PCB-Module**
- **Suitable for mobile applications**
- **Standing build-up style**
- **Very high efficiency**
- **100% functional tests of all parameters**
- **Dyn. and stat. short circuit proof**
- **Zero-load capable / no load stable**
- **Wide input voltage range 6 - 70V**

Series KSR *(preliminary)*

Main points:

Output:

- Accuracy absolute ± 1%
- Regulation $\Sigma(U_i+I_o+T_a)$ <±1,5%
- Output capacity CA required
- Ripple (5,1V with CA) <50mV$_{pp}$ (typ. <10mV$_{pp}$) const. over Ta
- Spikes <200 mV$_{pp}$ (T 1:1/100MHz)
- Response time ΔI=50% ≤ 200µs
- No-load-, short circuit proof
- Short circuit current ≤ 1,2 $I_{o\,max}$

Input:

- No-load power approx. 0,5 Watt
- ON-OFF-Remote / Inhibit (E/A)
- Input-CE
- Simply noise suppressible (application)
- Option: set point / Uo adjustment (BER)
- Option: synchronisation 4V / f+25% (SYN)
- External Auxiliary supply >34V Ui Application from Ui ≥17V

General:

- Ambient temperature: -40...+85°C Derating 1,5%/°C >70°C
- Forced air convection Limit temperature 100°C at ✱-point
- Option: temperature switch-off >110°C (T)
- Clock frequency > 150 kHz
- MTBF on request
- Open design
- Dimension (standing) 37 x 16 x 11 mm³

Ui	Ci	Uo	Io	Co	Model number
V	µF/V	V	A	µF/V	
6 - 17	2x100/25 P	1,2	15,0	820/4	KSR 012.15.17
6 - 32	2x150/20 R/P	1,2	12,0	820/4	KSR 012.12.32
6 - 17	2x100/25 P	1,5	15,0	820/4	KSR 015.15.17
6 - 32	2x150/20 R/P	1,5	12,0	820/4	KSR 015.12.32
6 - 17	2x100/25 P	2,7	15,0	820/4	KSR 027.15.17
6 - 32	2x150/20 R/P	2,7	12,0	820/4	KSR 027.12.32
6 - 17	2x100/25 P	3,3	15,0	680/6,3	KSR 033.15.17
6 - 32	2x150/20 R/P	3,3	12,0	680/6,3	KSR 033.12.32
7 - 17	2x100/25 P	5,1	12,0	680/6,3	KSR 05.12.17
7 - 34	2x100/25 R	5,1	10,0	680/6,3	KSR 05.10.34
8 - 36 50V/50ms 70V/2ms	Application	5,1	6,0	470/10	KSR 05.06.36 VG
8 - 17	2x100/25 P	6	10,0	470/10	KSR 06.10.17
9 - 34	2x100/25 R	6	8,0	470/10	KSR 06.08.34
11 - 34	2x100/25 R	9	5,5	220/16	KSR 09.05.34
15 - 36 50V/50ms 70V/2ms	Application	12	4,0	150/20	KSR 12.04.36 VG
18 - 34	2x150/20 R	15	4,0	100/25	KSR 15.04.34

Option:	BER	Set point 0...5V -> Uo: 0,5...Uo max
(additional charge)	T	Temp. switch-off >110°C PCB-temperature
	SYN	Clock frequency-synchronisation

This topology works as synchronic-Buck. Do not connect output sided energy carrier like batteries/High-Caps without de-coupling diode. (Uo > Ui not allowed)
In general we suggest to connect additional capacitors (Polymer-CAP[1)] recommended) close to the input and output connectors.

$$\text{Input fuse} \geq \frac{Uo \bullet Io\ max}{0{,}9 \bullet Ui\ min}$$

Modification costs for possible changes above values on request

1) NCC-Series

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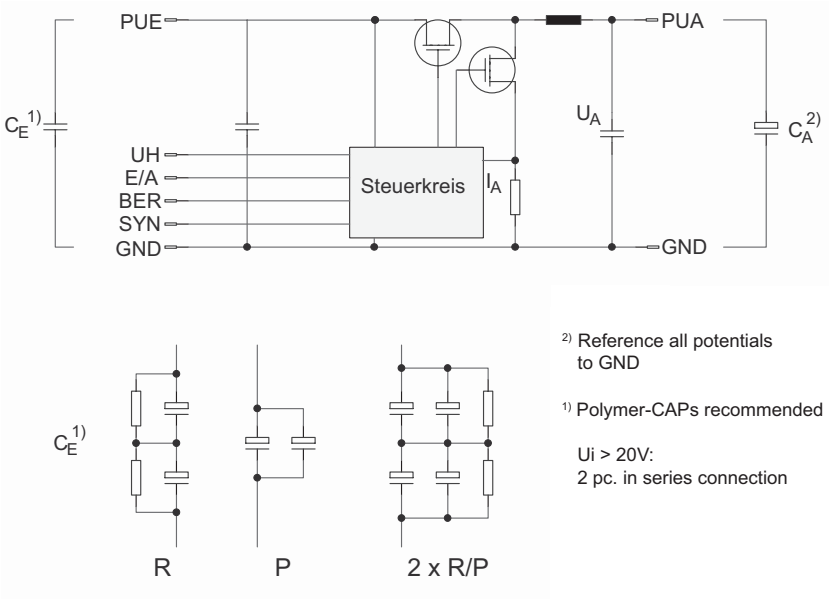
Switching regulators of the ***KSR*** series have been designed in an open, thermal stress-free build-up style. The wide input voltage range is ideal for the use in wide fluctuating on-board networks or as supplementary regulators. All electrical parameters (voltages, currents, frequencies, efficiency, ripple, spikes etc.) are 100%-tested at all internal points as well as on all customer interface points. The result is that the modules can guarantee a very high quality level. The choice of components and the manufacturing technology lead to the converter's high functional life time and reliable security.

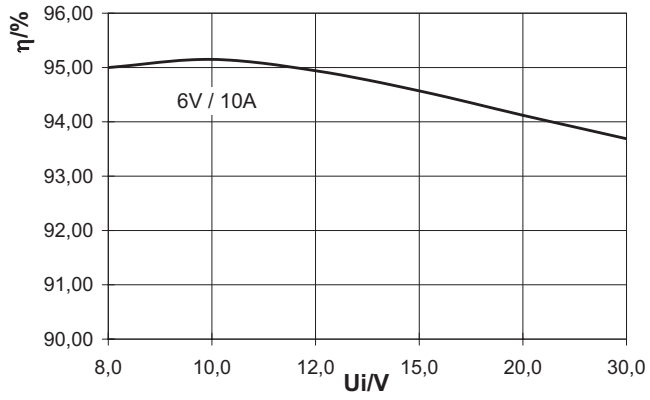


2) Reference all potentials to GND

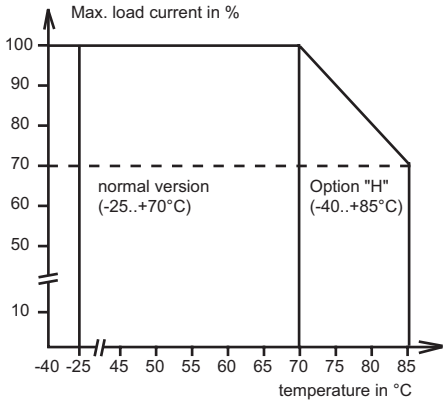
1) Polymer-CAPs recommended

Ui > 20V:
2 pc. in series connection

Efficiency:



Derating-Curve



Mechanics