

Typical unit

## PRODUCT OVERVIEW

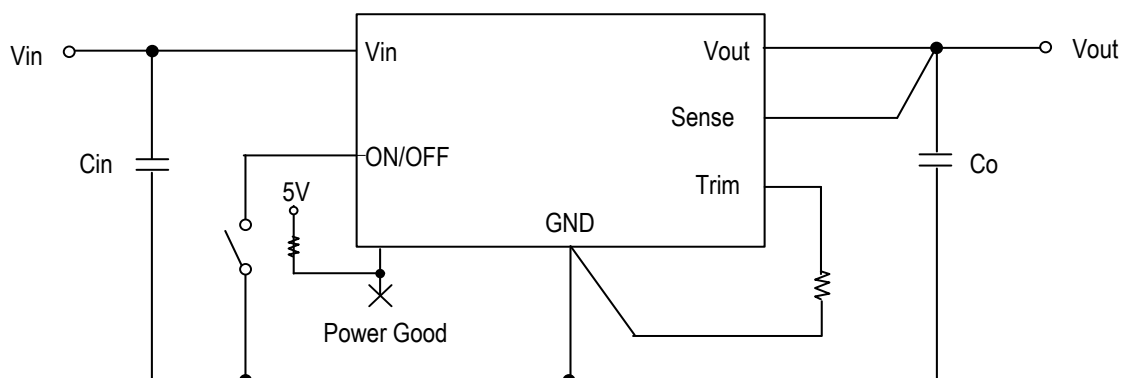
The **MYMGK1R806FRSR/MYMGK00506ERSR** are miniature Mono Block type non-isolated Point-of-Load (PoL) DC-DC power converters for embedded applications. The tiny form factor measures only 9.0 x 7.5 x 5.0 mm. Applications include powering FPGA/CPU's, datacom/telecom systems, Distributed Bus Architectures (DBA), programmable logic and mixed voltage systems. The converters have input voltage ranges of 4.5 to 5.5Vdc (MYMGK1R806FRSR) or 8.0 to 14.0Vdc (MYMGK00506ERSR) and a maximum output current of 6A. Based on a fixed frequency synchronous buck converter switching topology, this high power conversion efficient PoL module features programmable output voltage 0.7 to 1.8Vdc (MYMGK1R806FRSR) or 0.7 to 5.0Vdc (MYMGK00506ERSR), On/Off control and Power Good signal output. These converters also include under voltage lock out (UVLO), output short circuit protection and over-current protection.

## FEATURES

- Settable output voltage range
  - MYMGK1R806FRSR: 0.7 to 1.8Vdc
  - MYMGK00506ERSR: 0.7 to 5.0Vdc
- Up to 6A of output current
- Quick response to load change
- Ultra small surface mount package  
9.0 x 7.5 x 5.0mm
- High efficiency of 95%
- Outstanding thermal derating performance
- Over current protection
- On/Off control (Positive logic)
- Power Good signal
- RoHS-6 hazardous substance compliance
- High Reliability / Heat Shock Testing  
700cycle (-40 to +125degC)
- Meets CISPR 22 class B conducted emission

## SIMPLIFIED APPLICATION

MYMGK1R806FRSR/MYMGK00506ERSR



MYMGK1R806FRSR  
Cin: 47uF/10V x 2pcs  
Co: 220uF/4V x 2pcs

MYMGK00506ERSR  
Cin: 22uF/25V x 2pcs  
Co: 220uF/4V x 2pcs (at Vout=0.7-3.0V)  
100uF/6.3V x 4pcs (at Vout=3.0-5.0V)

(\*Typical topology is shown. Murata recommends an external input fuse.)

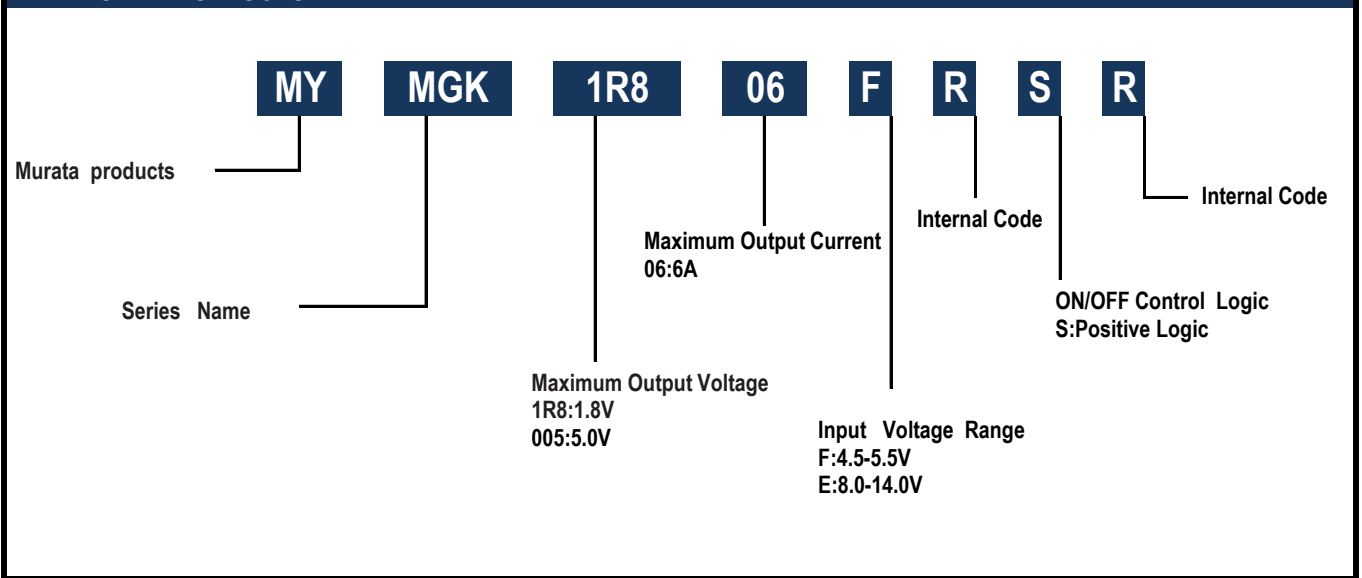


### PERFORMANCE SPECIFICATIONS SUMMARY AND ORDERING GUIDE (Including series products)

PART NUMBER	OUTPUT						INPUT				Efficiency (%)	ON/OFF	PACKAGE (mm)
	Vout (Vdc)	Iout (A,max.)	Power (W)	R/N typ. (% of Vout)	Regulation(max.)		Vin typ. (Vdc)	Range (Vdc)	Iin no load (mA)	Iin full load (A)			
					Line(%)	Load(%)							
MYMGK1R806FRSR	0.7-1.8 (typ.:1.8V)	6	11	0.5	±1.0	±1.0	5	4.5-5.5	13	2.4	90	Yes (Positive)	9.0 x 7.5 x 5.0
MYMGK00506ERSR	0.7-5.0 (typ.:5.0V)		30	0.4	±1.0	±1.0	12	8-14	24	2.6	95		

- All specifications are at typical line voltage, Vout = typ. and full load, +25degC unless otherwise noted. Output capacitors are 100uF x 4 or 220uF x 2 ceramic. Input capacitors are 47uF x 2 or 22uF x 2 ceramic and plenty electrolytic capacitors. See detailed specifications Input and Output capacitors are necessary for our test equipment.
- Use adequate ground plane and copper thickness adjacent to the converter.

### PART NUMBER STRUCTURE

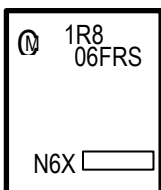


### Product Marking

Because of the small size of these products, the product marking contains a character-reduced code to indicate the model number and manufacturing date code. Not all items on the marking are always used. Please note that the marking differs from the product photograph. Here is the layout of the Marking.

Part Number	Product Code
MYMGK1R806FRSR	1R806FRS
MYMGK00506ERSR	00506ERS

#### Layout



#### Codes

- 1Pin Marking**  
1R806FRS Product code  
(Please see product code table beside)
- Manufacturing date code**  
N6X

The manufacturing date code is six characters or more:

- First character - Factory code
- Second character - Last digit of manufacturing Year  
For example "6" means "2016"
- Third character - Month code (1 through 9 and X through Z)
- Fourth character and after - Internal lot-code

The marking contains three rows of information:

- First row – Product code(Output voltage range)
- Second row – Product code(Other than the output voltage range)
- Third row – Manufacturing code