

FUNCTIONAL SPECIFICATIONS OF MYMGK1R806FRSR (Note 1)

ABSOLUTE MAXIMUM RATINGS	Conditions	Minimum	Typical	Maximum	Units
Input Voltage		-0.3		6.5	Vdc
ON/OFF Pin	Power on, referred to -Vin	-0.3		Vin-1.5	Vdc
PGOOD/Trim Pins	Power on, referred to -Vin		Source ONLY		
Output Current	Current-limited, no damage, short-circuit protected	0		6	A
Storage Temperature Range	Vin = Zero (no power)	-40		125	degC

Absolute maximums are stress ratings. Exposure of devices to greater than any of these conditions may adversely affect long-term reliability. Proper operation under conditions other than those listed in the Performance/Functional Specifications Table is not implied or recommended.

INPUT	Conditions	Minimum	Typical	Maximum	Units
Operating Voltage Range		4.5	5	5.5	Vdc
Start-up Threshold	Rising input voltage		4.3		Vdc
Under Voltage Shutdown	Note 12		4.1		Vdc
Internal Filter Type			Capacitive		
Input Current					
Full Load Conditions	Vin = 5.0V, Vout = 1.8V, Iout = 6A		2.4		A
Low Line	Vin = 4.5V, Vout = 1.8V, Iout = 6A		2.7		A
No Load Current	Iout = 0A, unit = ON		13		mA
Shut-Down Mode Input Current			1		mA

GENERAL and SAFETY	Conditions	Minimum	Typical	Maximum	Units
Efficiency	Vin = 5.0V, Vout = 1.8V, Iout = 6A		90.4		%
	Vin = 5.0V, Vout = 1.0V, Iout = 6A		84.7		
Safety	Certified to UL-60950-1, CSA-C22.2 No. 60950-1, IEC/EN60950-1, 2nd edition(pending)	Pending			
Calculated MTBF (Note 3)	+40degC, Vin = 5.0V, Vout = 1.8V, Iout = 50%		3,900,000		hours

DYNAMIC CHARACTERISTICS	Conditions	Minimum	Typical	Maximum	Units
Fixed Switching Frequency			250		kHz
Startup Time (Vin ON)	Vout = 1.8V (Vin On to 90% of Vout)		2.4		ms
Startup Time (Remote ON)	Vout = 1.8V (Remote On to 90% of Vout)		2.4		ms
Dynamic Load Response	(50-100% load step, di/dt)		2.5		A/us
Dynamic Load Peak Deviation	same as above		±3.0%		Voset

FUNCTIONS	Conditions	Minimum	Typical	Maximum	Units
Remote On/Off Control (Note 4)					
Logic					
ON State Range	ON = +1.5Vmin. to +Vin-1.5Vmax. or left open	1.5		Vin-1.5	V
OFF State Range	OFF = -0.3V to +1.1Vmax.	-0.3		1.1	V
Control Current	Open collector/drain			-	mA
Power-Good Output					
PGood TRUE (HI)		(Voset x 95%) < Vout < (Voset x 113%)			V
PGood FALSE (LO)		Out of above range			V

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OUTPUT	Conditions	Minimum	Typical	Maximum	Units
Total Output Power Range	See Derating	0		10.8	W
Voltage					
Output Voltage Range	Note 10	0.7		1.8	Vdc
Minimum Loading			None		
Accuracy (50% load, untrimmed)	Vin = 5.0V, Vout = 1.8V, Cout = 400uF, Ta = 25degC	±1			% of Vout
Over Voltage Protection	Note 13	>120%Vout			Vdc
Under Voltage Protection		<68%Vout			Vdc
Current					
Output Current Range	Note 2	0		6	A
Current Limit Inception	After warmup		9		A
Short Circuit					
Short Circuit Duration (remove short for recovery)	Output shorted to ground, no damage		Continuous		
Short Circuit Protection method	Note 5		Hiccup		
Pre-bias Start-up		Converter will start up if the external output voltage is less than set Vout.			
Regulation (Note8)					
Line Regulation	Vin = min. to max.			±1	% of Vout
Ripple and Noise (20MHz bandwidth)	Note 6			30	mV pk-pk
External Output Capacitance Range (Note 11)		400		3000	uF
MECHANICAL(Common)	Conditions	Minimum	Typical	Maximum	Units
Mechanical Dimension	L x W x H	9.0(typ.) x 7.5(typ.) x 5.0(max.)			mm
Weight			1.2		grams
ENVIRONMENTAL(Common)	Conditions	Minimum	Typical	Maximum	Units
Operating Ambient Temperature Range	With Derating (Note 2,7)	-40		85	degC
Storage Temperature Range	Vin = Zero (no power)	-40		125	degC
Thermal Protection/Shutdown	Measured in module (Note9)		145		degC
Moisture Sensitivity Level		3			
RoHS rating			RoHS-6		