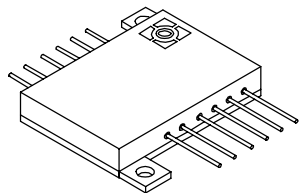


PRELIMINARY SPECIFICATION



10A, 5V to 3.3V Switching Regulator Hermetic Package

FEATURES

- High Efficiency
- Internal Short Circuit Protection
- High Power Density
- Hi- Rel Screening available
- Hermetic Package

APPLICATIONS

- High Power 5V to 3.3V Regulation
- DSP Controllers
- Embedded Processor Power
- General Purpose Low Voltage Logic Supply

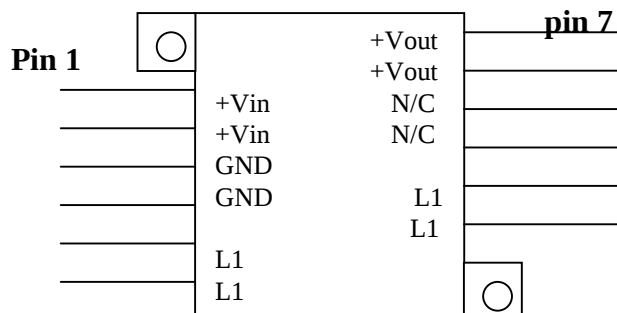
DESCRIPTION

The OM9550SF is ideally suited for on-board power regulation applications where small size and high efficiency are required. This part contains all input and output capacitance typically necessary and will only require one additional component (Inductor) to provide a complete 33W Low Voltage regulator. It is provided in a Hi- Rel F-12A package and is intended for hermetic applications requiring high power density and light weight.

MAXIMUM RATINGS @ Ta=25° C (unless otherwise specified)

Parameter	Value	Conditions
Input Voltage	6V	
Output Current	12A	Short Circuit
Power Dissipation	4.6W	Io=10A
Thermal Resistance	TBD	
Output Power	36W	Short Circuit
Lead Temp.	300°C	

Package Pinout



PERFORMANCE CHARACTERISTICS (Ta= 25°C)

INPUT

Parameter	Symbol	Test Conditions	MIN	MAX	Units
Line Regulation	Rline	4.5V ≤ Vin ≤ 5.5V	-0.5	+0.5	%
Input Voltage Range	Vin		4.5	5.5	V
Input Filtering ¹				220	uF

OUTPUT

Parameter	Symbol	Test Conditions	MIN	TYP	MAX	Units
Power	Po	Vo= 3.3V			33	W
Vout Accuracy	ΔVo			0.8	TBD	%
Vout Regulation	Vreg	Vin= 5V, 0.1A ≤ Io ≤ 10A		0.3	TBD	%
Output Ripple	Vη	Vin= 5V, Io= 10A		80	TBD	mV(p-p)
Current Limiting	Ilim	Vin= 5V		12		A
Efficiency	η	Vin= 5V, Io= 10A	TBD	87		%
Min. Load Current	Il(min)		0.1			A
Short Circuit Prot.		Direct short to ground		Output current foldback to 2A		

DYNAMIC

Parameter	Test Conditions	MIN	TYP	MAX	Units
Transient Response	50% load step ΔVout		40	200	uS mV
Frequency	-55 to 125°C	175	200	225	KHz

ENVIRONMENTAL

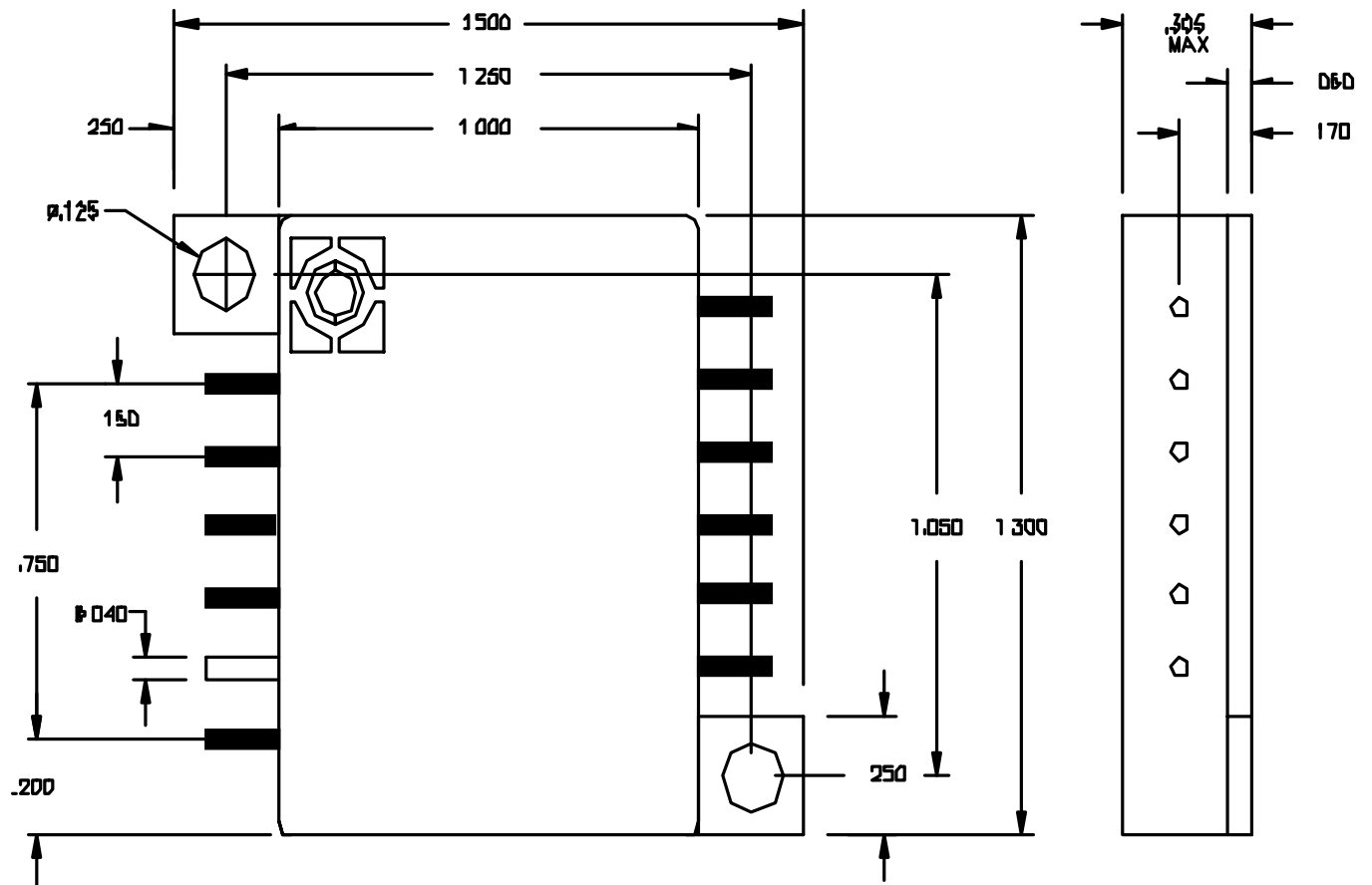
Parameter	Test Conditions	MIN	MAX	Units
Operating Temperature		-55	125	Degs. C
Storage Temp.		-55	150	Degs. C

PHYSICAL SPECIFICATIONS

Parameter	Test Conditions	TYP	Units
Pin Composition			
Case Size			
Length		1.30	in
Width		1.0	in
Height		0.305	in

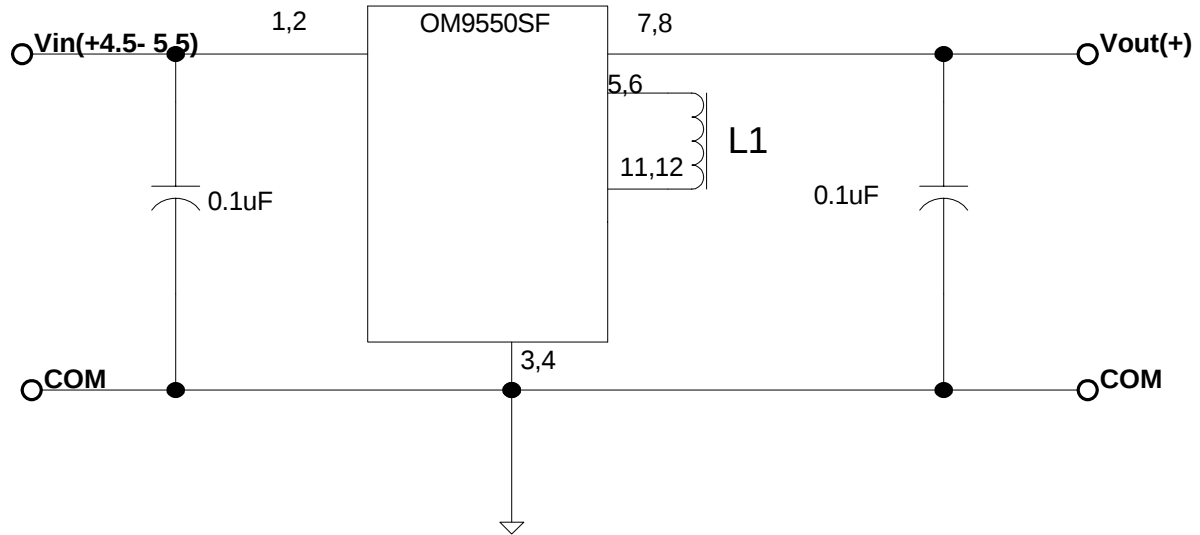
¹ Included in the package

MECHANICAL OUTLINE- F12A PACKAGE



OM9550SF

APPLICATION CIRCUIT



Notes:

1. L1 should be a 1.5uH, 15A (rms), 25A (sat), (Coilcraft #DO5022P-152HC) or equivalent.
2. 0.1 uF caps. are not required. They are suggested for additional EMI filtering if necessary.