

■ INTRODUCTION

The G9261C is a CMOS PFM-control step-up switching DC/DC converter. The VFM controller allows the duty ratio to be automatically switched according to the load, enabling products with a low ripple over a wide range, high efficiency, and high output current. With the G9261C, a step-up switching DC/DC converter can be configured by using an external coil, capacitor, and diode. The built-in MOSFET is turned off by a protection circuit when the voltage at the LX pin exceeds the limit to prevent it from being damaged. This feature, along with the mini package and low current consumption, makes the G9261C ideal for applications such as the power supply unit of portable equipment.

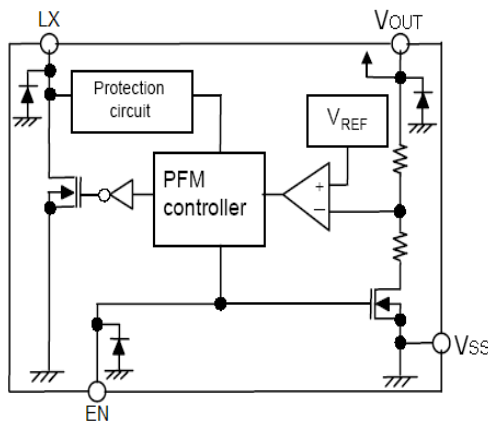
■ FEATURES

- Low voltage operation: Startup at 0.9 V @ $I_{OUT} = 1\text{ mA}$
- Work frequency: 300KHz
- External parts: Coil, capacitor, diode
- Accuracy of $\pm 2.5\%$
- High efficiency: 87% (typ.)
- Shutdown function
- Low ripple, Low noise

■ APPLICATIONS

- Digital cameras
- Electronic notebooks and PDAs
- Portable CD/MD players
- Cameras, video equipment,
- Communications equipment
- Power supply for microcomputers

■ BLOCK DIAGRAM



■ PIN CONFIGURATION

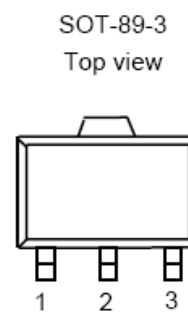


Table 5 G9261C (SOT-89-3 PKG)

PIN NO.	PIN NAME	FUNCTION
1	V _{SS}	GND pin
2	V _{OUT}	Output voltage pin
3	LX	External inductor connection pin

■ ABSOLUTE MAXIMUM RATINGS

(Unless otherwise specified, Ta=25°C)

PARAMETER		SYMBOL	RATINGS	UNITS
V _{OUT} pin voltage		V _{OUT}	V _{SS} -0.3 ~ V _{SS} +8	V
EN pin voltage		EN	V _{SS} -0.3 ~ V _{SS} +8	V
LX pin voltage		V _{LX}	V _{SS} -0.3 ~ V _{SS} +8	V
LX pin current		I _{LX}	1000	mA
Power dissipation	SOT-89-3	PD	350	mW
Operating temperature		T _{opr}	-20 ~+85	°C
Storage temperature		T _{stg}	-40 ~+125	°C
Soldering Temperature & Time		T _{solder}	260°C, 10s	

■ ELECTRICAL CHARACTERISTICS

(Unless otherwise specified, Ta=25°C)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Output voltage	V _{OUT}	—	V _{OUT(S)} ×0.975	V _{OUT}	V _{OUT(S)} ×1.025	V
Input voltage	V _{IN}	—	—	—	6	V
Operation start voltage	V _{ST}	I _{OUT} = 1 mA	—	—	1.2	V
Hold voltage	V _{HOLD}	I _{OUT} = 1 mA	0.9	—	—	V
Current consumption	I _{SS}	V _{OUT} =V _{OUT(S)} +0.5 V	—	7	—	μA
Current consumption during shutdown	I _{SSS}	V _{EN} = 0 V, No load	—	—	1.0	μA
Maximum Oscillation frequency	F _{max}	V _{OUT} = 0.95×V _{OUT} , measure waveform at LX pin	—	300	—	KHz
Duty ratio	Duty		—	75	—	%
Efficiency	EFFI		—	84	88	%
Current limit	I _{LIMIT}		—	800	—	mA
Shutdown pin input voltage	V _{SH}		1.5	—	—	V
	V _{SL}		—	—	0.3	V
Shutdown pin input current	I _{SH}		—	—	0.1	μA
	I _{SL}		-0.1	—	—	μA

 Remark: V_{IN} = V_{OUT(S)} × 0.6 applied, I_{OUT} = V_{OUT(S)} / 250 Ω

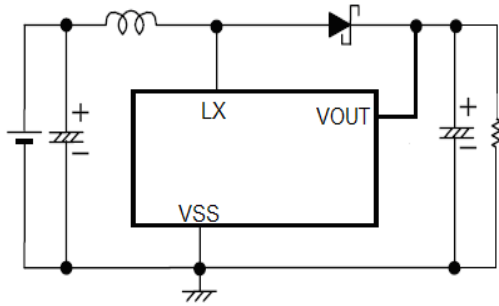
 V_{OUT(S)} specified above is the set output voltage value, and V_{OUT} is the typical value of

■ STANDARD CIRCUITS

Component: Inductor: 22uH(Sumida)

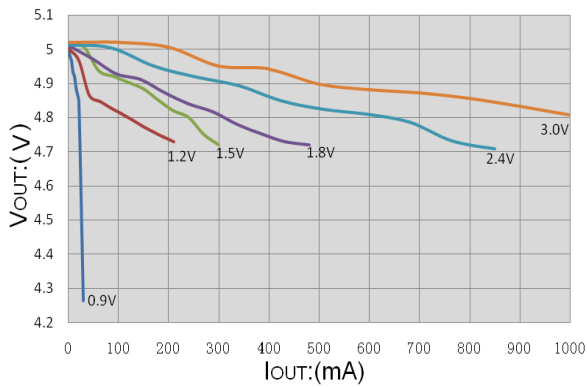
Capacitor: 47uF/10V(Tantalum)

Diode: IN5817、IN5819

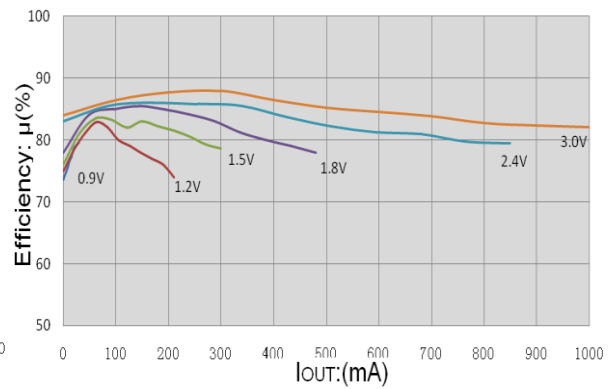


■ TYPICAL PERFORMANCE CHARACTERISTICS

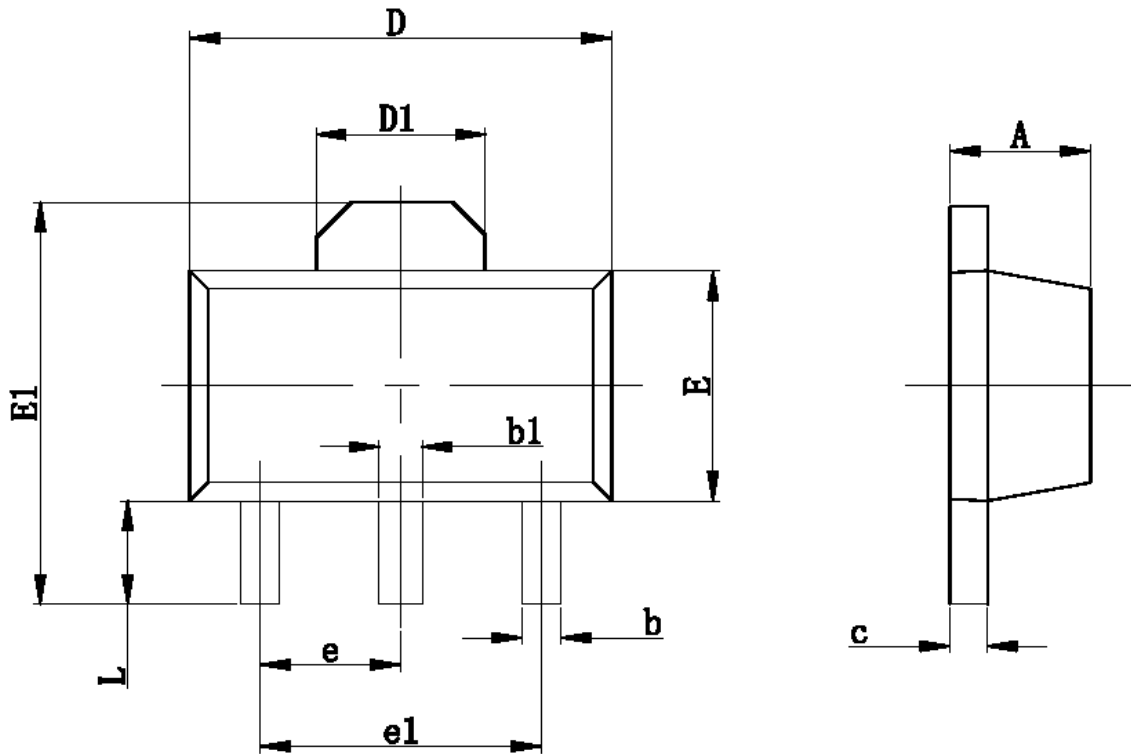
a、 V_{OUT} vs. I_{OUT} :



b、Efficiency vs. I_{OUT} :



• SOT-89-3



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.197
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF		0.061 REF	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP		0.060 TYP	
e1	3.000 TYP		0.118 TYP	
L	0.900	1.200	0.035	0.047