M62261FP

VOLTAGE CONVERTER FOR MMIC

DESCRIPTION

The M62261FP is a C-MOS semiconductor circuit for driving MMIC, by connecting to the external capacitance, it can generate 2-times of inverting input voltage.

With resident charge-pump type 2-times inverting input voltage circuit, $-V_{out}$ and $-2V_{out}$ can perform 2 kinds of negative source system.

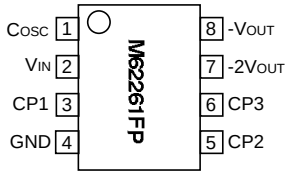
FEATURES

- By connecting to external capacitance, it can generate 2-times of inverting input voltage.
- Capability of output current .....10mA(Min.)
- Low voltage operation is possible ..... V_{IN}=3V(Typ.)
- Small size 8 pin package.

APPLICATION

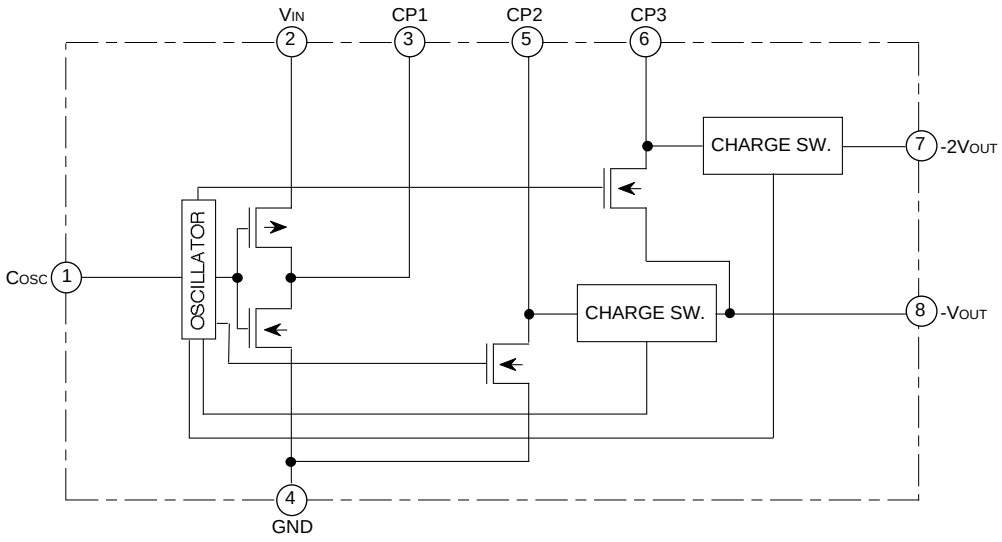
MMIC for cordless telephone

PIN CONFIGURATION (TOP VIEW)



Outline 8P2S-A

BLOCK DIAGRAM



EXPLANATION OF TERMINALS

Pin No.	Symbol	Function
①	C_{OSC}	Connect pin for capacitance of oscillator circuit
②	V_{IN}	Input voltage
③	CP1	Connect pin 1 for capacitance of charge-pump
④	GND	GND pin
⑤	CP2	Connect pin 2 for capacitance of charge-pump
⑥	CP3	Connect pin 3 for capacitance of charge-pump
⑦	$-2V_{OUT}$	Output pin of 2-times inverting input voltage
⑧	$-V_{OUT}$	Output pin of inverting input voltage

ABSOLUTE MAXIMUM RATINGS (Ta=25°C, unless otherwise noted)

Symbol	Parameter	Conditions	Ratings	Unit
V_{IN}	Supply voltage		6	V
P_d	Power dissipation	Ta=25°C	440	mW
T_{opr}	Operating temperature		-20 to +75	°C
T_{stg}	Storage temperature		-40 to +125	°C

ELECTRICAL CHARACTERISTICS (VIN=3V,Ta=25°C,C_{OSC}=220pF, unless otherwise noted)

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
I_{CC}	Dissipation current			350	900	μA
V_{IN}	Range of source voltage		2.7		5.5	V
R_{O1}	Output resistor	$-V_{OUT}$ output pin (with load at $-V_{OUT}$ pin only)		40	80	Ω
R_{O2}		$-2V_{OUT}$ output pin (with load at $-2V_{OUT}$ pin only)		120	240	Ω
V_{EF}	Efficiency of voltage convert	RL=∞	95	99.8		%
P_{EF1}	Efficiency of power convert	$-V_{OUT}$ output, I_{L1}=5mA		90		%
P_{EF2}		$-2V_{OUT}$ output, I_{L2}=5mA		90		%
f_{OSC}	Oscillating frequency	C_{OSC}=220pF	2	6	10	kHz

APPLICATION EXAMPLE