

Crystal Oscillators IC AN8958SSM

Overview

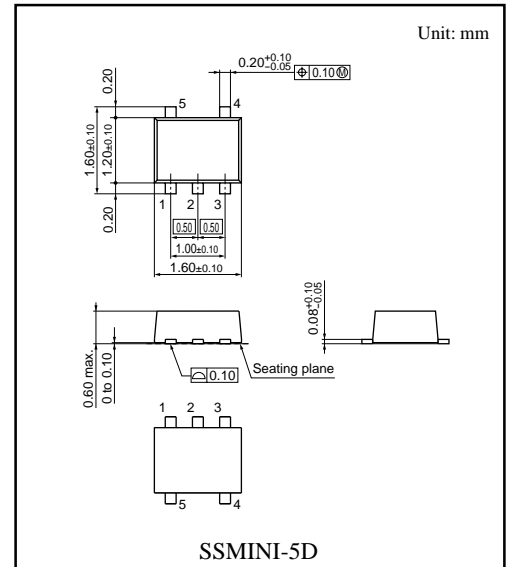
The AN8958SSM is a low-voltage operating IC for crystal oscillator. With a built-in stabilized power supply, oscillator circuit and output buffer, this IC facilitates construction of crystal oscillator circuitry.

Features

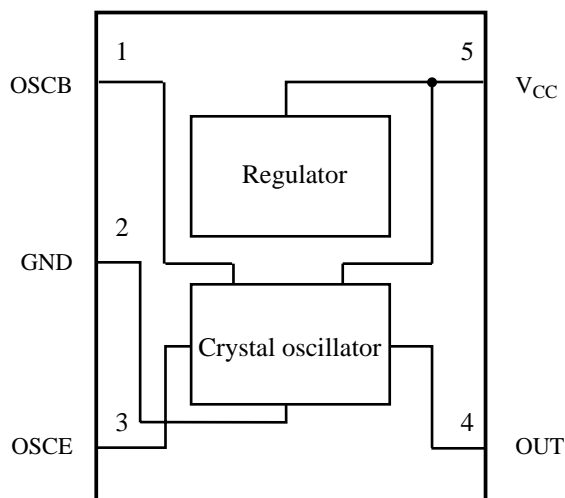
- Broad power supply voltage range: 2.6 V to 5.5 V
- SSMINI 5-pin package: 1.6 mm × 1.6 mm (incl. lead)

Applications

- Crystal oscillators for mobile communication equipment



Block Diagram



Pin Descriptions

Pin No.	Function
1	Oscillator input
2	GND
3	Oscillator feedback
4	Output
5	Power supply

† The products and specifications are subject to change without any notice. Please ask for the latest product standards to guarantee the satisfaction of your product requirements.

■ Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit	Note
Storage temperature	T_{stg}	-55 to +125	°C	1
Operating ambient temperature	T_{opr}	-30 to +80	°C	1
Supply voltage	V_{CC}	6.5	V	
Supply current	I_{CC}	—	mA	
Power dissipation	P_D	54	mW	2

Note) 1. All items are at $T_a = 25^\circ\text{C}$, except for the operating ambient temperature and storage temperature parameters.
 2. $T_a = 80^\circ\text{C}$

■ Recommended Operating Range

Supply voltage	V_{CC}	2.3 V to 5.5 V
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■ Electrical Characteristics ($T_a = 25^\circ\text{C} \pm 2^\circ\text{C}$, $V_{CC} = 2.7\text{ V}$ unless otherwise specified)

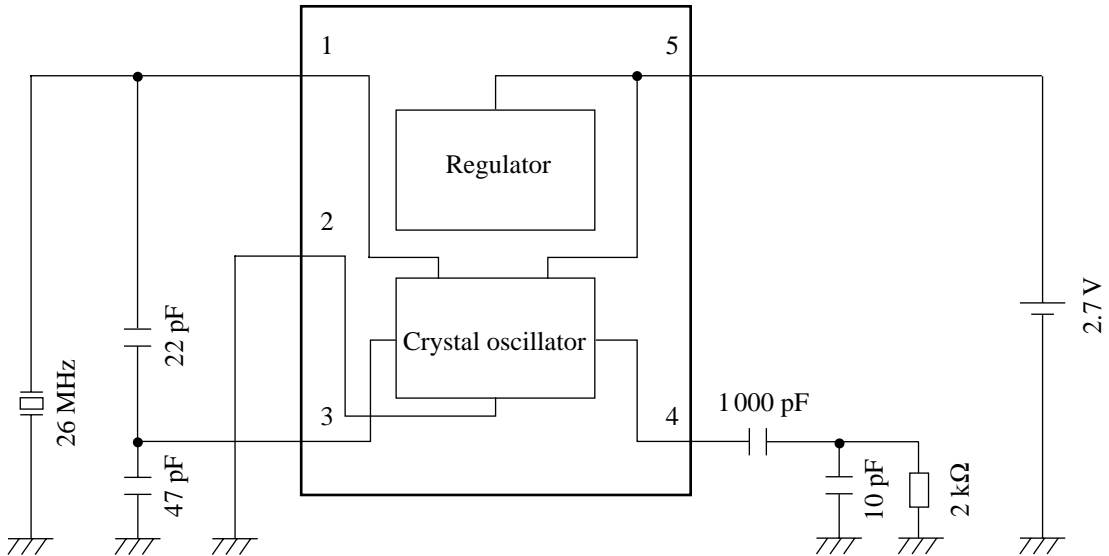
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Supply current	I_{CC}		1.15	1.39	1.63	mA
OSCB-pin voltage	V_{OB}		1.23	1.48	1.73	V
OSCE-pin voltage	V_{OE}		540	730	920	mV
OSCC-pin current	I_{OC}		1.40	1.80	2.20	mA

■ Electrical Characteristics (Reference Data for Designing)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Crystal oscillator frequency	FOSC	$f_{OSC} = 26\text{ MHz}$	-50	—	+50	PPM
Crystal oscillator amplitude	V_{PP}	$f_{OSC} = 26\text{ MHz}$	0.8	—	—	V[p-p]
Oscillation circuit negative resistance	RN	$f_{OSC} = 26\text{ MHz}$	100	—	—	Ω
Change in oscillator frequency with load	FOSCL	$R_L, C_L = \pm 10\%$	-0.2	—	+0.2	PPM
Change in oscillator frequency with supply voltage	FOSCV	$V_{CC} = \pm 0.1\text{ V}$	-0.2	—	+0.2	PPM
Output amplitude duty ratio	DUTY	Base on GND	40	—	60	%

Note) * The above characteristics are reference values for designing and not guaranteed values.

■ Application Circuit



■ Package Power Dissipation

