General Description

SSF101 is a small 8pin DFN packaged customized ASIC with configurable parameters. It supports frequency division and in-phase output function.

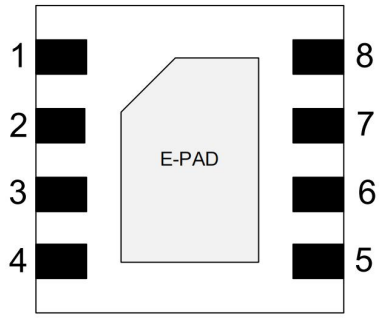
Features

- Power supply input: 2.3V~5.5V
- OUT1, 1x Push Pull Digital Output, 24.576Mhz output
- OUT2, 1x Push Pull Digital Output, 12.288Mhz output
- GND Power Ground
- OUT3, 1x Push Pull Digital Output 192Khz output
- NC Not Connected, Internal pull-down 1M
- IN Digital input with Schmitt, Internal pull-down 1M，24.576Mhz input
- DFN - 8 Package

Applications

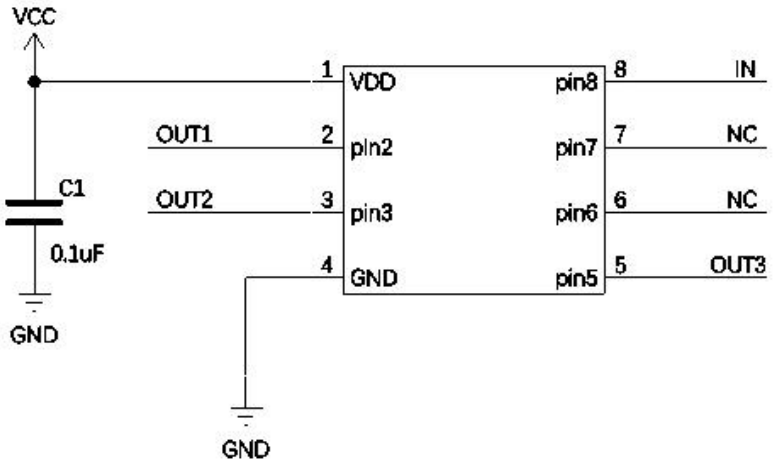
- Ultra low power consumption
- Pb - Free and RoHS Compliant and Halogen - Free

Pin Configurations



2.0mm x 2.0mm 8 Pin DFN
Top View

Block Diagram



Note:

1. Voltage on any pin must be with in GND to VDD.

2. ESD protect is must be considered on all Pins which connected to external interface.

Pin name

Pin	Pin	TYPE	Function
1	VDD	Power	Power supply input, 2.3V~5.5V
2	OUT1	1x Push Pull Digital Output	24.576Mhz output.
3	OUT2	1x Push Pull Digital Output	12.288Mhz output.
4	GND	Power	Ground
5	OUT3	1x Push Pull Digital Output	192Khz output.
6	NC	Not Connected	Internal pull-down 1M
7	NC	Not Connected	Internal pull-down 1M
8	IN	Digital input with Schmitt	Internal pull-down 1M, 24.576Mhz input.

Absolute Maximum Ratings

Parameter	Min.	Max.	Unit
Supply Voltage on VDD to GND	-0.3	7	V
Maximum Voltage Input to Pins	-0.3	7	V
VDD to GND Maximum DC Current	--	90	mA
Input Leakage Current	--	1000	nA
Storage Temperature Range	-65	150	°C
Junction Temperature	--	150	°C
ESD Protection (HBM)	2000	--	V
ESD Protection (CDM)	500	--	V
Moisture Sensitivity Level (MSL)	1		

Customize Electrical Characteristics

VDD =3.3V±10%, Temp=25°C

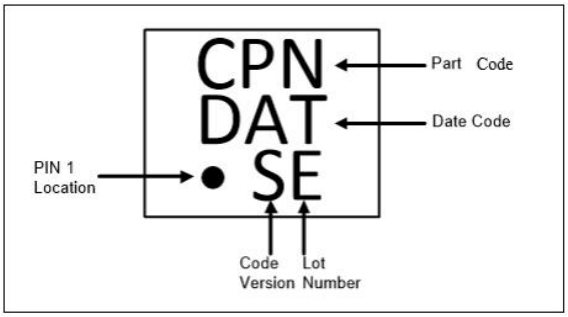
Symbol	Parameter	Condition/Note	Min.	Typ.	Max.	Unit
I_Q	Quiescent Current	Static inputs and floating outputs		0.1		μA

Electrical Characteristics

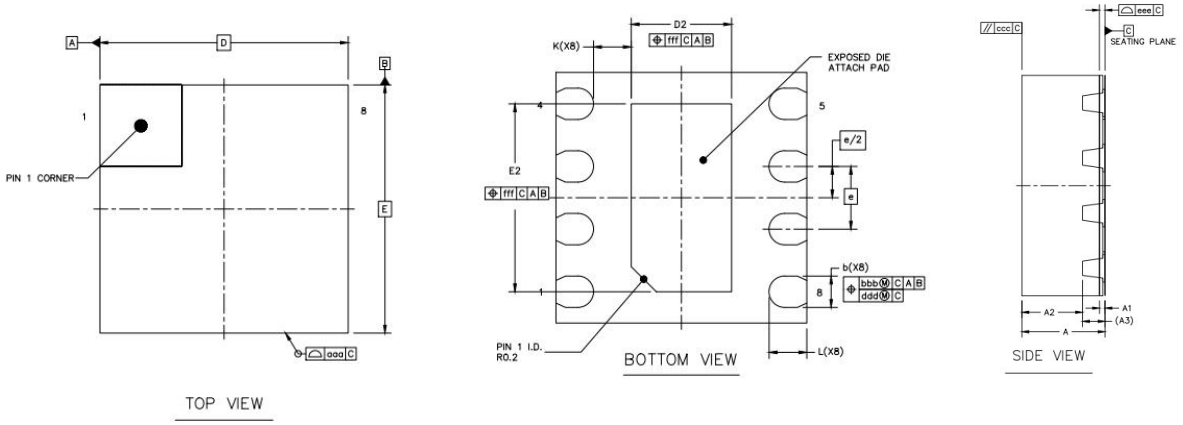
VDD =3.3V±10%, Temp: -40~85°C

Symbol	Parameter	Condition/Note	Min.	Typ.	Max.	Unit
V_{DD}	Supply Voltage		1.71	3.3	5.5	V
T_A	Operating Temperature		-40	25	85	°C
C_{VDD}	Capacitor Value at VDD		--	0.1	--	μF
I_{IH}	HIGH-Level Input Current	Logic Input PINs; V_{IN} = VDD	-1.0	--	1.0	μA
I_{IL}	LOW-Level Input Current	Logic Input PINs; V_{IN} = 0V	-1.0	--	1.0	μA
POR						
PON_{THR}	Power On Threshold	VDD Level Required to Start Up	1.67	1.80	1.92	V
$POFF_{THR}$	Power Off Threshold	VDD Level Required to Switch Off	0.95	1.25	1.54	V
T_{SU}	Startup Time	From VDD rising past PON_{THR}	--	1.2	1.6	mS
I_{stand_by}		T=+25℃	--	97	--	nA
IO PIN						
V_{IH}	HIGH-Level Input Voltage	Logic Input	1.90	--	--	V
		Logic Input with Schmitt Trigger	2.11	--	--	V
		Low-Level Logic Input	0.92	--	--	V
V_{IL}	LOW-Level Input Voltage	Logic Input	--	--	1.30	V
		Logic Input with Schmitt Trigger	--	--	1.16	V
		Low-Level Logic Input	--	--	0.77	V
V_{HYS}	SchmittTrigger Hysteresis Voltage	Logic Input with Schmitt Trigger	--	0.45	--	V
I_{LKG}	Input leakage (Absolute Value)		--	1	1000	nA
V_{OH}	HIGH-Level Outpu Voltage	Push-Pull, I_{OH} = 3 mA, 1X Drive	2.60	--	--	V
		Push-Pull, I_{OH} = 3 mA, 2X Drive	2.80	--	--	V
V_{OL}	LOW-Level Output Voltage	Push-Pull, I_{OL}= 3 mA, 1X Drive	--	--	0.25	V
		Push-Pull, I_{OL} = 3 mA, 2X Drive	--	--	0.22	V
		Open Drain, I_{OL} = 3 mA, 1X Drive	--	--	0.12	V
		Open Drain, I_{OL} = 3 mA, 2X Drive	--	--	0.089	V
I_{OH}	HIGH-Level Output Pulse Current (see Note)	Push-Pull, V_{OH} = 2.4 V , 1X Drive	5	--	--	mA
		Push-Pull, V_{OH} = 2.4 V, 2X Drive	10	--	--	mA
I_{OL}	LOW-Level Output Pulse Current (see Note)	Push-Pull, V_{OL} = 0.4 V, 1X Drive	5	--	--	mA
		Push-Pull, V_{OL} = 0.4 V, 2X Drive	10	--	--	mA
		Open Drain, V_{OL} = 0.4 V, 1X Drive	15	--	--	mA
		Open Drain, V_{OL} = 0.4 V, 2X Drive	30	--	--	mA
Note: DC or average current through any pin should not exceed value given in Absolute Maximum Conditions.						

Package Top Marking



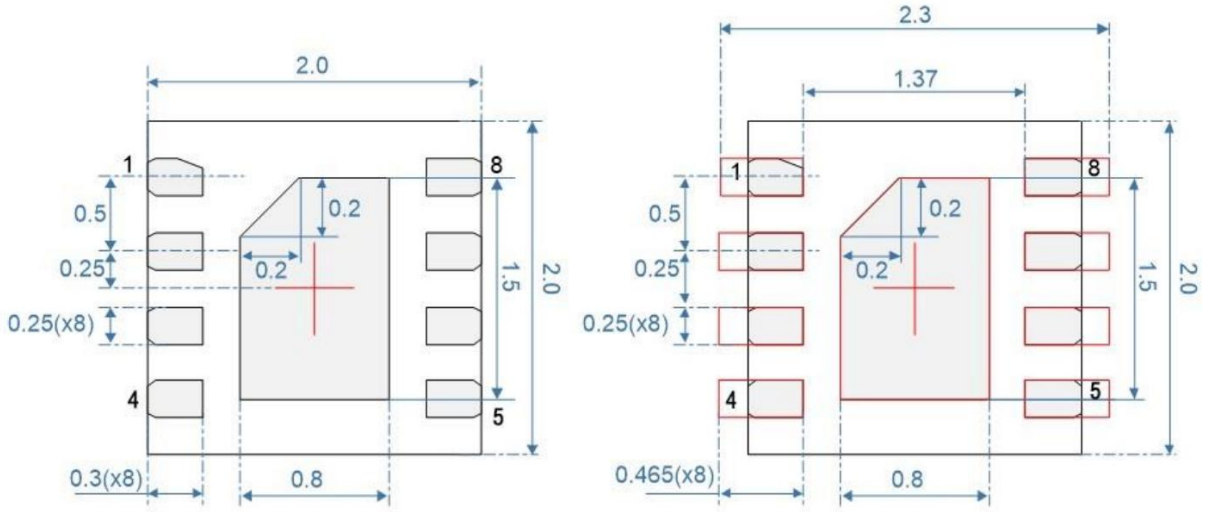
Package Drawing and Dimensions



		SYMBOL	MIN	NOM	MAX
TOTAL THICKNESS		A	0.7	0.75	0.8
STAND OFF		A1	0	0.02	0.05
MOLD THICKNESS		A2	---	0.55	---
L/F THICKNESS		A3		0.203 REF	
LEAD WIDTH		b	0.2	0.25	0.3
BODY SIZE	X	D		2 BSC	
	Y	E		2 BSC	
LEAD PITCH		e		0.5 BSC	
EP SIZE	X	D2	0.7	0.8	0.9
	Y	E2	1.4	1.5	1.6
LEAD LENGTH		L	0.2	0.3	0.4
LEAD TIP TO EXPOSED PAD EDGE		K		0.3 REF	
PACKAGE EDGE TOLERANCE		aaa		0.1	
MOLD FLATNESS		ccc		0.1	
COPLANARITY		eee		0.05	
LEAD OFFSET		bbb		0.1	
		ddd		0.05	
EXPOSED PAD OFFSET		fff		0.1	

Recommended Land Patter

Unit: mm



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