

General Description

SSF105 is a small 8pin DFN packaged customized ASIC with configurable parameters. It supports frequency division and in-phase output function.

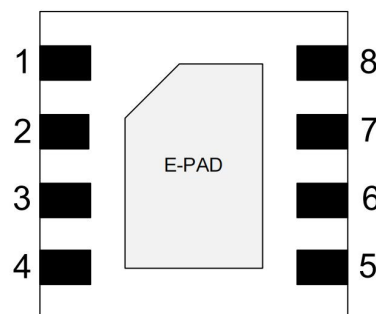
Features

- Power supply input: 2.3V~5.5V
- OUT1, 1x Push Pull Digital Output, 12.288Mhz output
- OUT2, 1x Push Pull Digital Output, 3.072Mhz output
- GND Power Ground
- OUT3, 1x Push Pull Digital Output 48Khz output
- NC Not Connected, Internal pull-down 1M
- IN Digital input with Schmitt, Internal pull-down 1M, 12.288Mhz input
- DFN - 8 Package

Applications

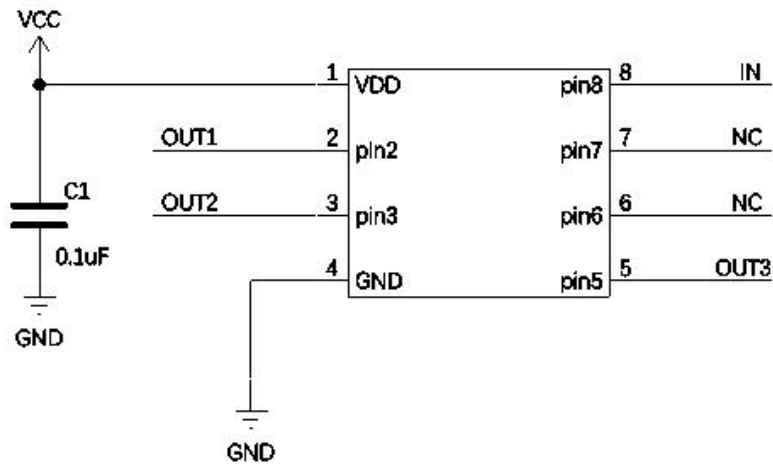
- Ultra low power consumption
- Pb - Free and RoHS Compliant and Halogen - Free

Pin Configurations



2.0mm x 2.0mm 8 Pin DFN
Top View

Block Diagram



Note:

1. Voltage on any pin must be within GND to VDD.
2. ESD protection 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	12.288Mhz output.
3	OUT2	1x Push Pull Digital Output	3.072Mhz output.
4	GND	Power	Ground
5	OUT3	1x Push Pull Digital Output	48Khz 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, 12.288Mhz 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

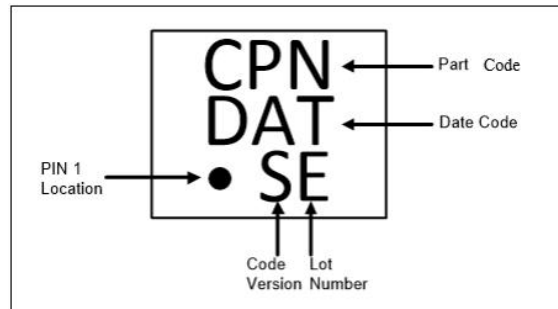
Symbol	Parameter	Condition/Note	Min.	Typ.	Max.	Unit
I _q	Quiescent Current	Static inputs and floating outputs		0.1		μA

Electrical Characteristics

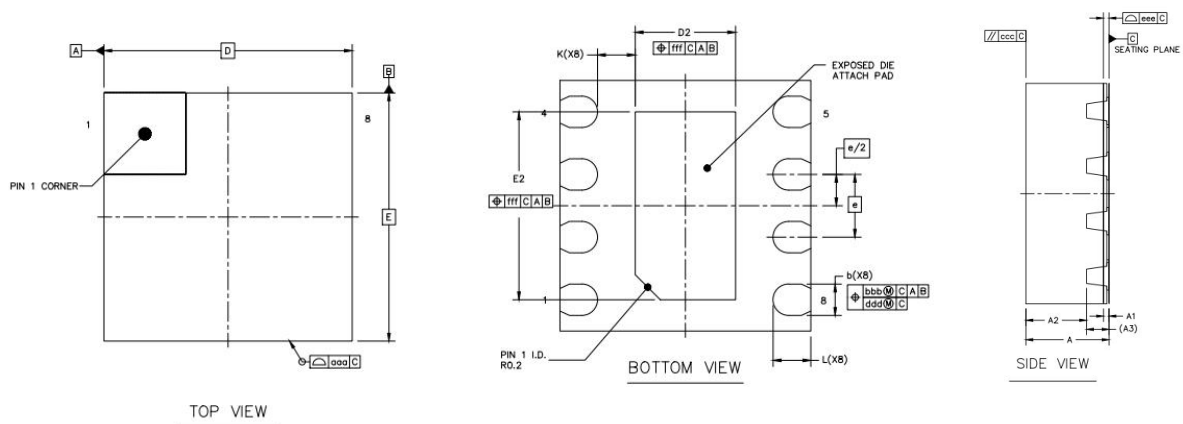
VDD = 3.3V±10%, Temp: -40~85°C

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°C	--	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



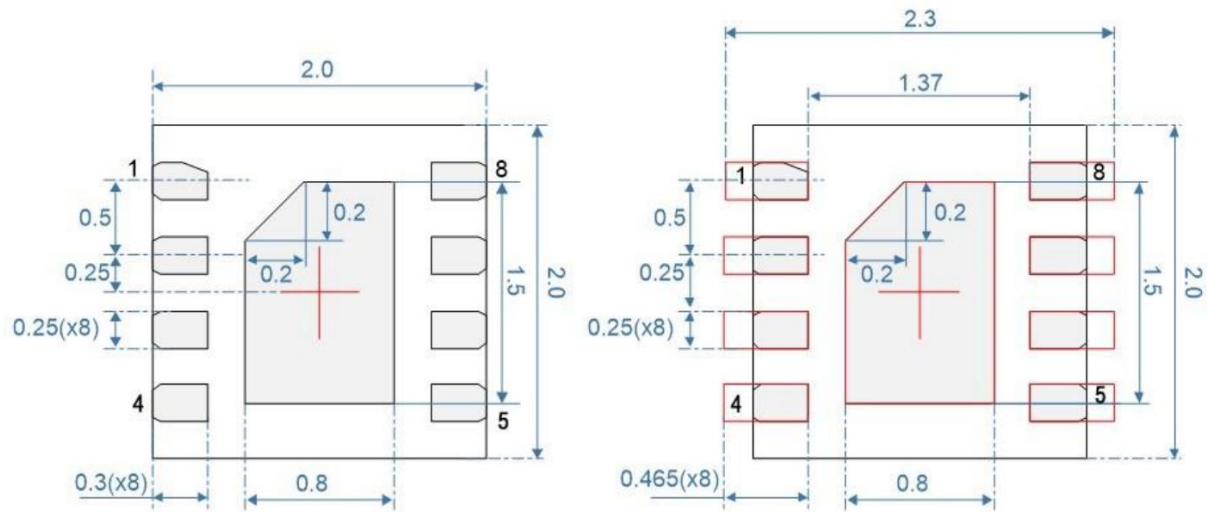
Package Drawing and Dimensions



		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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