

1692 to 1973 MHz Voltage Controlled Oscillator

OVERVIEW

Voltage-controlled oscillator (VCO) is the generator that can be tuned over a wide range of frequencies by applying a control voltage to it.

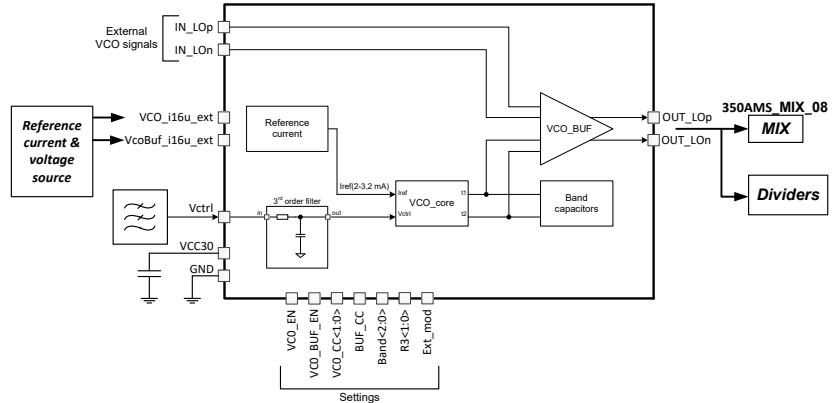
Frequency tuning range is defined by a control voltage of a built-in switched capacitor sections, and the built-in varicap is used for a fine adjustment.

VCO buffer can work with external VCO signals.

IP technology: AMS S35D4M5.

IP status: silicon proven.

Total area: 0.579 mm².



ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Condition	Value			Unit
			min	typ.	max	
Supply voltage	V_{cc}	-	2.85	3.0	3.15	V
Operating temperature range	T	-	-60	27	+85	°C
VCO frequency tuning range	F	L1 band	1692	1769	1973	MHz
VCO phase noise	NF	100 kHz	-	-	-119	dBc/Hz
Control voltage	V_{ctrl}	-	0.24	-	2.4	V
Tuning sensitivity	K	$V_{ctrl} = 1V$	-	60	-	MHz/V
Output amplitude	$A_{out\ p-p}$	Differential output	360	420	500	mV
Supply current	I_{cc}	-	-	5.8	8.2	mA
Standby current	I_{stb}	-	-	3	100	nA
Input logic-level high	V_{IH}	For digital inputs	0.7 V_{cc}	-	$V_{cc}+0.25$	V
Input logic-level low	V_{IL}		-0.25	-	0.3	V