

IF Systems

The Philips Family of High Performance IF Systems

	V <sub>CC</sub>	I <sub>CC</sub>	PIns	Pack- age	Input Freq	IF Freq	f <sub>RF</sub> =45MHz			RSSI Range	Fast RSSI	Freq Check Pin	IF Filter Match	Output Op Amps	Feature Highlights
							Input Sensitivity	Mixer Gain	Input IP <sup>3</sup>						
<b>FM IF</b>															
NE/SA604A	4.5-8V	3.3mA@6V	16	D,N	25MHz	25MHz	0.22µV <sup>1</sup>	-	-	90dB	-	-	455kHz	-	-High Sensitivity
NE/SA614A	4.5-8V	3.3mA@6V	16	D,N	25MHz	25MHz	0.22µV <sup>1</sup>	-	-	80dB	-	-	455kHz	-	
NE/SA624	4.5-8V	3.3mA@6V	16	D,N	25MHz	25MHz	0.22µV <sup>1</sup>	-	-	90dB	✓	-	455kHz	-	-Wide IF BW
<b>Mixer/FM IF</b>															
NE/SA605	4.5-8V	5.7mA@6V	20	D,DK,N	500MHZ	25MHz	0.22µV <sup>1</sup>	13dB	-10dBm	90dB	-	-	455kHz	-	-High Sensitivity
NE/SA615	4.5-8V	5.7mA@6V	20	D,DK,N	500MHZ	25MHz	0.22µV <sup>1</sup>	13dB	-10dBm	80dB	-	-	455kHz	-	-High Input Frequency
NE/SA625	4.5-8V	5.7mA@6V	20	D,DK,N	500MHZ	25MHz	0.22µV <sup>1</sup>	13dB	-10dBm	90dB	✓	-	455kHz	-	-Wide IF BW
NE/SA627	4.5-8V	5.7mA@6V	20	D,DK,N	500MHZ	25MHz	0.22µV <sup>1</sup>	13dB	-10dBm	90dB	✓	✓	455kHz	-	
<b>LowVoltage Mixer/FM IF</b>															
SA606	2.7-7V	3.5mA@3V	20	D,DK,N	150MHZ	2MHz	0.31µV <sup>1</sup>	17dB	-9dBm	90dB	-	-	455kHz	Audio Op Amp RSSI Op Amp	-High Sensitivity
SA616	2.7-7V	3.5mA@3V	20	D,DK,N	150MHZ	2MHz	0.31µV <sup>1</sup>	17dB	-9dBm	80dB	-	-	455kHz	Audio Op Amp RSSI Op Amp	-Low Power
SA607	2.7-7V	3.5mA@3V	20	D,DK,N	150MHZ	2MHz	0.31µV <sup>1</sup>	17dB	-9dBm	90dB	-	✓	455kHz	Audio Op Amp RSSI Op Amp	-Audio/RSSI output Op Amps
SA617	2.7-7V	3.5mA@3V	20	D,DK,N	150MHZ	2MHz	0.31µV <sup>1</sup>	17dB	-9dBm	80dB	-	✓	455kHz	Audio Op Amp RSSI Op Amp	-Power-Down Mode (SA626/636/639)
SA608	2.7-7V	3.5mA@3V	20	D,DK,N	150MHZ	2MHz	0.31µV <sup>1</sup>	17dB	-9dBm	90dB	-	✓	455kHz	Audio Op Amp RSSI Op Amp	
SA626	2.7-5.5V	6.5mA@3V	20	D,DK,N	500MHZ	2MHz	0.54µV <sup>2</sup>	11dB <sup>2</sup>	-16dBm	90dB	✓	-	10.7MHz	RSSI Op Amp	
SA636	2.7-5.5V	6.5mA@3V	20	D,DK,N	500MHZ	2MHz	0.54µV <sup>2</sup>	11dB <sup>2</sup>	-16dBm	90dB	✓	-	10.7MHz	RSSI OP AMP	
SA639	2.7-5.5V	8.5mA@3V	24	DH	500MHZ	25MHz	2.24µV <sup>4</sup>	12dB <sub>4</sub>	-12.5dBm <sup>4</sup>	90dB	✓	-	10.7MHz	Audio Buffered RSSI Op Amp Post-detect Amp Data Switch	
SA676	2.7-5.5V	3.5mA@3V	20	D,DK	100MHZ	25MHz	0.45µV	17dB	-10dBm	70dB	-	-	455kHz		
<b>Low Voltage Mixer/Digital IF</b>															
SA637	2.7-5.5V	3.5mA@3V	20	D,DK	200MHZ	2MHz	$\frac{-117dBm^3}{0.31\mu V}$	15dB	-10dBm	90dB	✓		455kHz	RSSI Op Amp	

Part	Description	V <sub>CC</sub>	I <sub>CC</sub>	Pins	Pkg	Input Freq	Gain (power)	Noise Figure	Input IP3	1dB Comp	Input Imped.	Out Imped.	Features
<b>IF Transceiver</b>													
SA1638	R <sub>X</sub> : IF amp+I/Q mixers+buffers T <sub>X</sub> : I/Q Mixers+buffers+IF Synthesizer	3.3-5.5V	R <sub>X</sub> : 16mA T <sub>X</sub> : 19.5mA	48	BE	70-400MHz				In-Band -53dBv Other -47dBv		1kΩ	-Internal IF PLL -Tunable IF BW=50-850 kHz -Two DC regulators
SA1630	R <sub>X</sub> : 74dB VGA+I/Q mixers+buffers T <sub>X</sub> : I/Q mixers+buffers	2.7-5.5V	R <sub>X</sub> : 33.5mA T <sub>X</sub> : 26.5mA	48	BE	70-400MHz							-Internal IF PLL 74dB VGA
<b>Temperature Ranges</b> NE: 0 to 70°C SA: -40 to +85°C				<b>Package Descriptions</b> D: Small Outline-16 Small Outline-20						<b>IF Filter Match</b> 455kHz=1.5kΩ 10.7MHz=330Ω			