Table 9. FM Receiver Characteristics[1,2]

(V_{DD} = 2.7 to 5.5 V, V_{IO} = 1.5 to 3.6 V, T_A = –20 to 85 °C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Input Frequency	f_{RF}		76	—	108	MHz
Sensitivity with Headphone Network[3,4,5]		(S+N)/N = 26 dB	—	2.2	3.5	µV EMF
Sensitivity with 50 Ω Network[3,4,5,6]		(S+N)/N = 26 dB	—	1.1	—	µV EMF
RDS Sensitivity[6]		∆f = 2 kHz, RDS BLER < 5%	—	15	—	µV EMF
LNA Input Resistance[6,7]			3	4	5	kΩ
LNA Input Capacitance[6,7]			4	5	6	pF
Input IP3[6,8]			100	105	—	dBµV EMF
AM Suppression[3,4,6,7]		m = 0.3	40	50	—	dB
Adjacent Channel Selectivity		±200 kHz	35	50	—	dB
Alternate Channel Selectivity		±400 kHz	60	70	—	dB
Spurious Response Rejection[6]		In-band	35	—	—	dB
Audio Output Voltage[3,4,7]			72	80	90	mV_{RMS}
Audio Output L/R Imbalance[3,7,9]			—	—	1	dB
Audio Frequency Response Low[6]		–3 dB	—	—	30	Hz
Audio Frequency Response High[6]		–3 dB	15	—	—	kHz
Audio Stereo Separation[7,9]			25	—	—	dB
Audio Mono S/N[3,4,5,7,10]			55	63	—	dB
Audio Stereo S/N[4,5,7,10,11]			—	58	—	dB
Audio THD[3,7,9]			—	0.1	0.5	%
De-emphasis Time Constant[6]		FM_DEEMPHASIS = 2	70	75	80	µs
		FM_DEEMPHASIS = 1	45	50	54	µs
Audio Output Load Resistance[6,10]	R_L	Single-ended	10	—	—	kΩ
Audio Output Load Capacitance[6,10]	C_L	Single-ended	—	—	50	pF

Notes:

1. Additional testing information is available in Application Note AN388. Volume = maximum for all tests. Tested at RF = 98.1 MHz.
2. To ensure proper operation and receiver performance, follow the guidelines in “AN383: Antenna Selection and Universal Layout Guidelines.” Silicon Laboratories will evaluate schematics and layouts for qualified customers.
3. F_{MOD} = 1 kHz, 75 µs de-emphasis, MONO = enabled, and L = R unless noted otherwise.
4. ∆f = 22.5 kHz.
5. B_{AF} = 300 Hz to 15 kHz, A-weighted.
6. Guaranteed by characterization.
7. V_{EMF} = 1 mV.
8. $|f_2 – f_1| > 2$ MHz, $f_0 = 2 \times f_1 – f_2$. AGC is disabled. Refer to "6. Pin Descriptions: Si4734/35-GM" on page 30.
9. ∆f = 75 kHz.
10. At L_{OUT} and R_{OUT} pins.
11. Analog audio output mode.
12. At temperature (25°C).