Table 6: Transmitter Characteristics

(Vcc = 2.7 ~ 3.6 V, T_A = -25 ~ 85 ^{o}C, unless otherwise noticed. Typical values are at Vcc = 3.0V and T_A = 25°C).

SYMBOL	PARAMETERS	CONDITIONS	MIN	TYP	MAX	UNIT
R_{audio_in}	Audio input impedance	At pin ALI and ARI	10		80	kΩ
C_{audio_in}	Audio input capacitance[1]	At pin ALI and ARI		2	5	pF
G_{audio_In}	Audio input gain	RIN[1:0] = 01	-1.5		15	dB
ΔG_{audio_In}	Audio gain step	For any gain setting	0.5	1	1.5	dB
τ_{emph}	Pre-emphasis time constant[1]	PETC = 1	71.3	75	78.7	μs
		PETC = 0	47.5	50	52.5	
SNR_{audio_tx}	Tx audio SNR[3]	MONO, Δf = 22.5 kHz		73		dB
		STEREO, Δf = 67.5 kHz, Δf_{pilot} = 6.75 kHz		66		
THD_{audio_tx}	Tx audio THD[3]	STEREO, Δf = 67.5 kHz, Δf_{pilot} = 6.75 kHz		0.03	0.1	%
α_{LR_tx}	L/R separation [2, 3]		45	50		dB
B_{LR_tx}	L/R channel imbalance [1, 2]	L and R channel gain imbalance at 1 kHz offset from DC			1	dB
M_{pilot}	19 kHz pilot modulation [2, 3, 6]	Relative to 75 kHz deviation	7	9.0	15	%
SUP_{sub}	38 kHz sub-carrier [2, 3] suppression		40			dB
C_{tune}	Output capacitance tuning range		5		30	pF
P_{out}	RF output voltage swing[4]	RF Channel frequency = 88 MHz	82		124	dBμV
ΔG_{RF_Out}	Power gain step	O er process, temperature		1.5		dB
ΔP_{out}	Power gain flatness	Over 76 MHz ~ 108 MHz	-2		2	dB
P_{mask}	RF output spectrum mask[5]	120 kHz to 240 kHz offset		-50	-45	dBc
		240 kHz to 600 kHz offset		-55	-50	
		>600 kHz offset			-45	
F_{rf}	RF channel frequency		76		108	MHz
F_{ch}	Channel frequency step		50	100	200	kHz
F_{err}	Channel center frequency accuracy		-2		2	kHz

SYMBOL	PARAMETERS	CONDITIONS	MIN	TYP	MAX	UNIT
F_{perr}	Pilot Tone frequency accuracy[1]		-2		2	Hz
F_{pk}	Modulation peak frequency deviation	STEREO		75		kHz
		MONO		22.5		

Notes:
1. Guaranteed by design.
2. Stereo (MONO = 0).
3. 1000mVp-p, 1 kHz tone at ALI pin, no input signal at ARI pin.
4. Into matched antenna (see application note for details).
5. Within operating band 76 MHz to 108 MHz.
6. Value set with GAIN_TXPLT[5:0] (reg. 0Fh, bits 5:0). The user must conform to local regulatory requirements for low-power unlicensed FM broadcast operation when setting this value.