



A6058

LINEAR INTEGRATED CIRCUIT

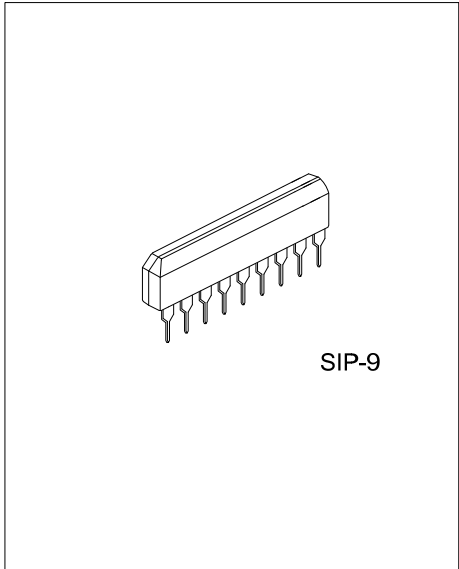
FM FRONT-END

DESCRIPTION

The UTC **A6058** is designed for a FM front-end application, which is suitable to a portable radio or a radio cassette. Comparing with conventional types, supply voltage dependence, overload characteristics and spurious radiation characteristics are improved.

FEATURES

- * Excellent supply voltage dependence of local oscillator: oscillator stop $V_{CC}=0.9V$ (typ)
- * Improved inter-modulation characteristics by double balanced type mixer circuit
- * Low spurious radiation
- * Wide operating voltage range(1.6V ~ 6V)

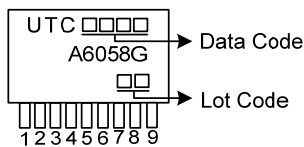


ORDERING INFORMATION

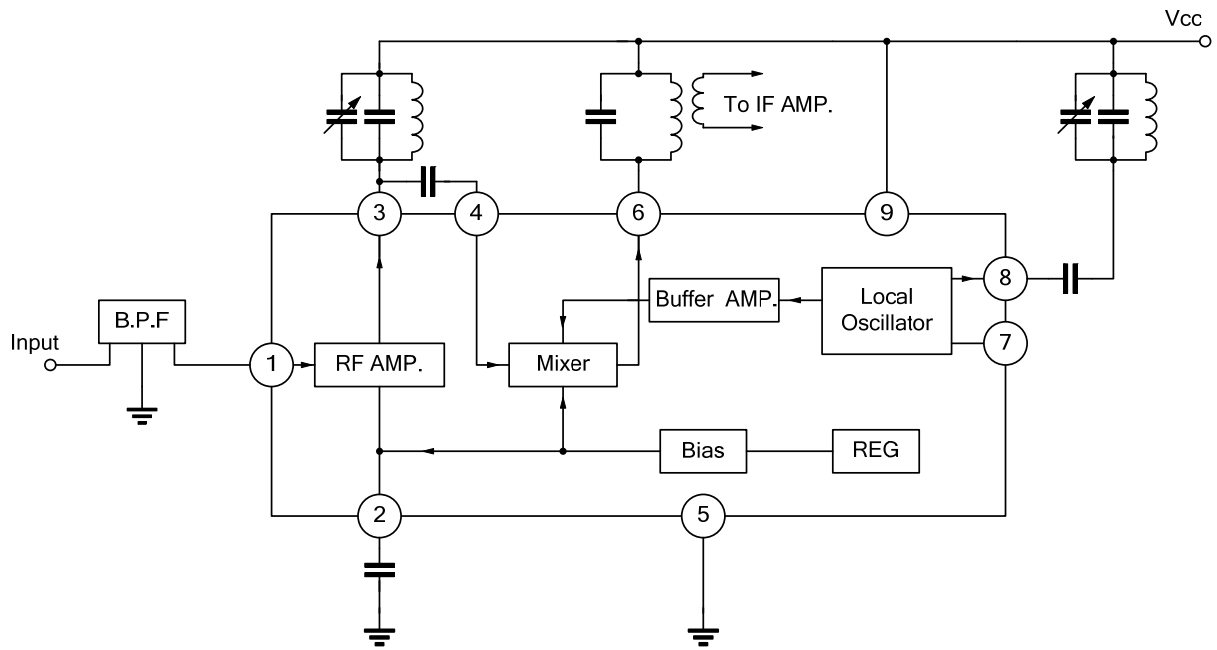
Ordering Number	Package	Packing
A6058G-G09-T	SIP-9	Tube

<p>A6058G-G09-T</p> <pre> graph TD A6058G-G09-T --- L1[] L1 --- L2[] L1 --- L3[] L2 --- L4[] L2 --- L5[] L3 --- L6[] L4 --- L7[] L5 --- L8[] L6 --- L9[] L7 --- L10[] L8 --- L11[] L9 --- L12[] L10 --- L13[] L11 --- L14[] L12 --- L15[] L13 --- L16[] L14 --- L17[] L15 --- L18[] L16 --- L19[] L17 --- L20[] L18 --- L21[] L19 --- L22[] L20 --- L23[] L21 --- L24[] L22 --- L25[] L23 --- L26[] L24 --- L27[] L25 --- L28[] L26 --- L29[] L27 --- L30[] L28 --- L31[] L29 --- L32[] L30 --- L33[] L31 --- L34[] L32 --- L35[] L33 --- L36[] L34 --- L37[] L35 --- L38[] L36 --- L39[] L37 --- L40[] L38 --- L41[] L39 --- L42[] L40 --- L43[] L41 --- L44[] L42 --- L45[] L43 --- L46[] L44 --- L47[] L45 --- L48[] L46 --- L49[] L47 --- L50[] L48 --- L51[] L49 --- L52[] L50 --- L53[] L51 --- L54[] L52 --- L55[] L53 --- L56[] L54 --- L57[] L55 --- L58[] L56 --- L59[] L57 --- L60[] L58 --- L61[] L59 --- L62[] L60 --- L63[] L61 --- L64[] L62 --- L65[] L63 --- L66[] L64 --- L67[] L65 --- L68[] L66 --- L69[] L67 --- L70[] L68 --- L71[] L69 --- L72[] L70 --- L73[] L71 --- L74[] L72 --- L75[] L73 --- L76[] L74 --- L77[] L75 --- L78[] L76 --- L79[] L77 --- L80[] L78 --- L81[] L79 --- L82[] L80 --- L83[] L81 --- L84[] L82 --- L85[] L83 --- L86[] L84 --- L87[] L85 --- L88[] L86 --- L89[] L87 --- L90[] L88 --- L91[] L89 --- L92[] L90 --- L93[] L91 --- L94[] L92 --- L95[] L93 --- L96[] L94 --- L97[] L95 --- L98[] L96 --- L99[] L97 --- L100[] </pre> <p>(1)Packing Type (2)Package Type (3)Green Package</p>	<p>(1) T: Tube (2) G09: SIP-9 (3) G: Halogen Free and Lead Free</p>
---	---

MARKING



■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING ($T_A=25^\circ\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V_{CC}	8	V
Power Dissipation	P_D	500	mW
Operating Temperature	T_{OPR}	-25 ~ +75	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS

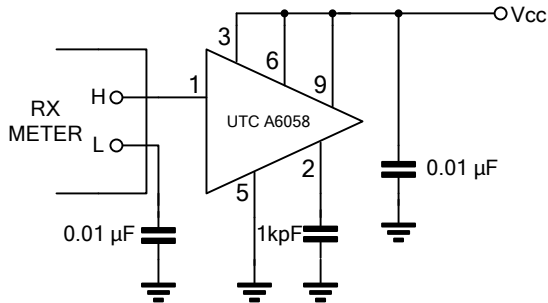
($T_A=25^\circ\text{C}$, $V_{CC}=5\text{V}$, $f=83\text{MHz}$, $f_m=1\text{kHz}$, $\Delta f=22.5\text{kHz}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CIRCUIT	TEST CONDITIONS	MIN	TYP	MAX	UNIT	
Quiescent Current	I_Q		$V_{IN}=0$		5.2	8	mA	
-3dB Limiting Sensitivity	$V_{IN(LIMIT)}$	2	-3dB		3	7	dB μ	
Quiescent Sensitivity	Q_s	2			11		dB μ	
Conversion Gain	G_c				31		dB	
Local OSC Voltage	V_{OSC}	1	$f_{OSC}=60\text{MHz}$	90	165	220	mV $_{RMS}$	
Pin 1 Impedance	Parallel Input Resistance	R_{IP1}	3		57		Ω	
Pin 3 Impedance	Parallel Output Resistance	R_{IP3}	3	$f=83\text{MHz}$	25		k Ω	
		C_{OP3}			2.0		pF	
Pin 4 Impedance	Parallel Input Resistance	R_{IP4}	3		2.7		k Ω	
		C_{OP4}			3.3		pF	
Pin 6 Impedance	Parallel Output Resistance	R_{IP6}	3		$f=10.7\text{MHz}$	100		k Ω
		C_{OP6}				4.8		pF
Local OSC Stop Voltage	V_{STOP}	1			0.9	1.3	V	

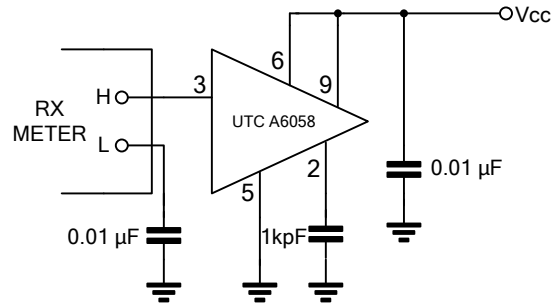
■ TEST CIRCUITS(Cont.)

Test Circuit 3

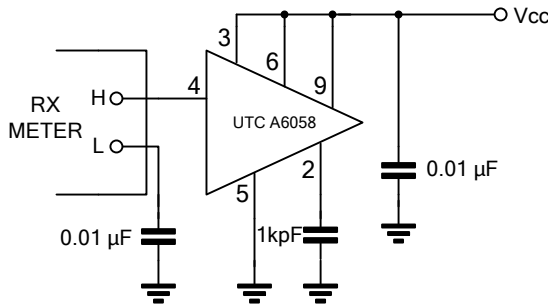
(a) Rip1



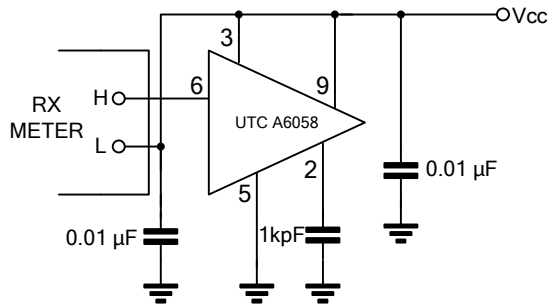
(b) ROP3,COP3



(c) Rip4,Cip4



(d) ROP6,COP6



■ TEST CIRCUIT COIL DATA

COIL	f_0	Q_0	TURNS	CAPACITANCE	
T1 RF COIL	100MHz	100	0.7mm \varnothing ,2.25T Center Tap	15pF	
T2 OSC COIL	100MHz	100	0.7mm \varnothing ,2.5T	15pF	
T3 IFT	10.7MHz	115	(1) ~ (3) 2T (4) ~ (6) 1T \varnothing 0.12mm	75pF	
T4 QUAD COIL	10.7MHz	150	(4) ~ (6) 14T \varnothing 0.12mm	47pF	

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.