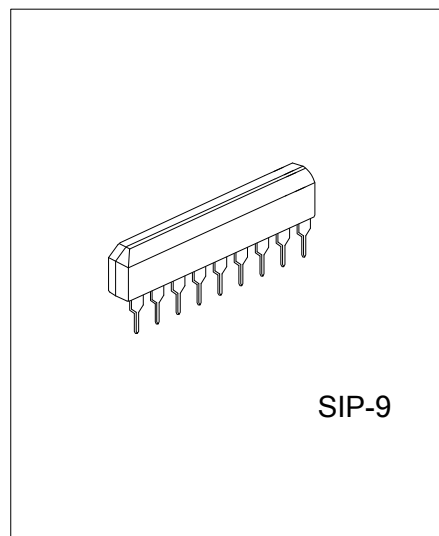


**A6043****LINEAR INTEGRATED CIRCUIT****FM STEREO MULTIPLEX****■ DESCRIPTION**

The UTC **A6043** is Phase Locked Loop(PLL) FM stereo multiplex IC. It is suitable for automotive applications and portable radio applications.

■ FEATURES

- * Low and wide operation: $V_{CC} = 3V \sim 12V$
- * High pilot lamp ON sensitivity: $V_{L(ON)} = 9mV_{rms}$ (Typ.)
- * Suitable for LED driving: $I_{LAMP} = 20mA$ (Max.)
- * Recommendable input voltage range: $V_{IN} = 200 \sim 700mV_{rms}$
- * Low distortion: THD = 0.08% (Typ.) at $V_{IN} = 200mV_{rms}$ (Stereo)
- * VCO stop capability stereo lamp and turn off are simultaneously operated by connect pin 7 to V_{CC} .
- * Easy adjustment (The monitored free running frequency of VCO is 38kHz at pin 6.)

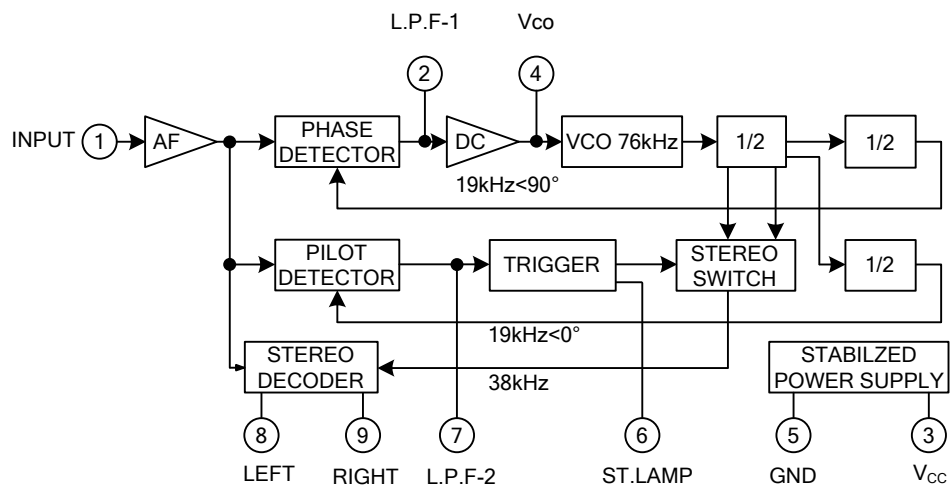


*Pb-free plating product number: A6043L

■ ORDERING INFORMATION

Order Number		Package	Packing
Normal	Lead free		
A6043-G09-T	A6043L-G09-T	SIP-9	Tube

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V _{CC}	12	V
Lamp Voltage	V _{LAMP}	16	V
Lamp Current	I _{LAMP}	20	mA
Power Dissipation	P _D	500	mW
Operating Temperature	T _{OPR}	-20 ~ +85	°C
Storage Temperature	T _{STG}	-40 ~ +150	°C

■ ELECTRICAL CHARACTERISTICS

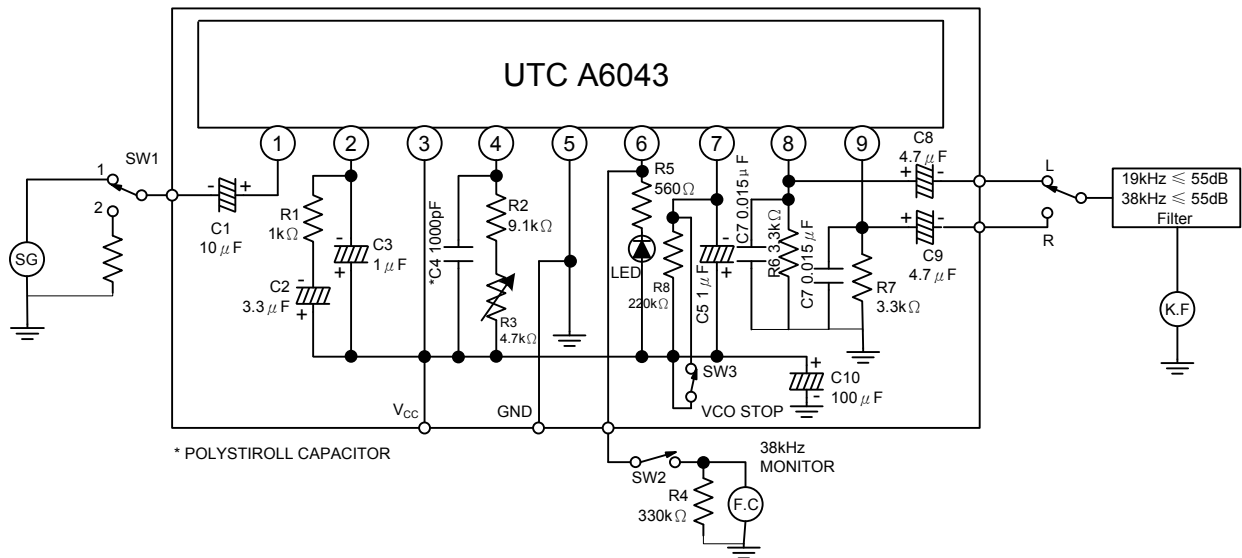
1. DC CHARACTERISTICS (Ta = 25°C, V_{CC} = 8V, terminal Voltage at No Signal.)

PIN NO.	PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
1	Composite Signal Input	Input		3.5		V
2	PLL Low-Pass Filter	LPF1		6.6		V
3	V _{CC}	V _{CC}		8.0		V
4	V _{CO}	V _{CO}		7.1		V
5	Ground	GND		0		V
6	Stereo Lamp	SLED				V
7	Pilot Detect Low-Pas Filter	LPF2		7.4		V
8	L-ch output	L-ch		4.0		V
9	R-ch output	R-ch		4.0		V

2. AC ELECTRICAL CHARACTERISTICS (Ta = 25°C, V_{CC} = 8V, f = 1kHz, unless otherwise specified.)

PARAMETER		SYMBOL	TEST CONDITIONS		MIN	TYP	MAX	UNIT
Supply Current		I _{CC}	at Lamp off			11	18	mA
Maximum Input Voltage(Stereo)		V _{IN(MAX)}	L+R = 90%, P = 10%			900		mV _{rms}
Channel Separation		CS	L+R = 180 mV _{rms} , P = 20mV _{rms}		36	45		dB
Total Harmonic Distortion	Monaural	THD	V _{IN} = 200mV _{rms}			0.08	0.3	%
	Stereo		L+R = 180 mV _{rms} , P = 20mV _{rms}			0.08		%
Voltage Gain		G _V	V _{IN} = 200mV _{rms}		-2.0	0.5	+2.0	dB
Channel Balance		CB	V _{IN} = 200mV _{rms}			0	1.5	dB
Lamp Sensitivity	ON	V _{L(ON)}	Pilot Input			9	15	mV _{rms}
	OFF	V _{L(OFF)}			2	6		mV _{rms}
Stereo Lamp Hysteresis		V _{HYS}	To Turn Off from Lamp Turn On			3		mV _{rms}
Capture Range		CR	P = 20mV _{rms}			±3		%
Carrier Leak	19kHz	CL	L+R = 180 mV _{rms} , P = 20mV _{rms}			34		dB
	38kHz					42		
SCA Rejection Ratio		SCA Rej.	L+R = 160 mV _{rms} , P = 20mV _{rms} SCA = 20mV _{rms} , f _{SCA} = 67kHz			70		dB
Signal to Noise Ratio		S/N	V _{IN} = 200mV _{rms} , f = 1kHz, R _G = 620Ω			74		dB
Input Resistance		R _{IN}				33		kΩ
Output Current (Pins 8, 9)		I _{OUT}	R _L = 3.3kΩ	V _{CC} = 3.5V		0.3	0.6	mA
				V _{CC} = 8.0V		1.2	1.8	
				V _{CC} = 12V		1.4	2.1	

■ TEST CIRCUIT



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