

AM TUNER FOR CAR AUDIO

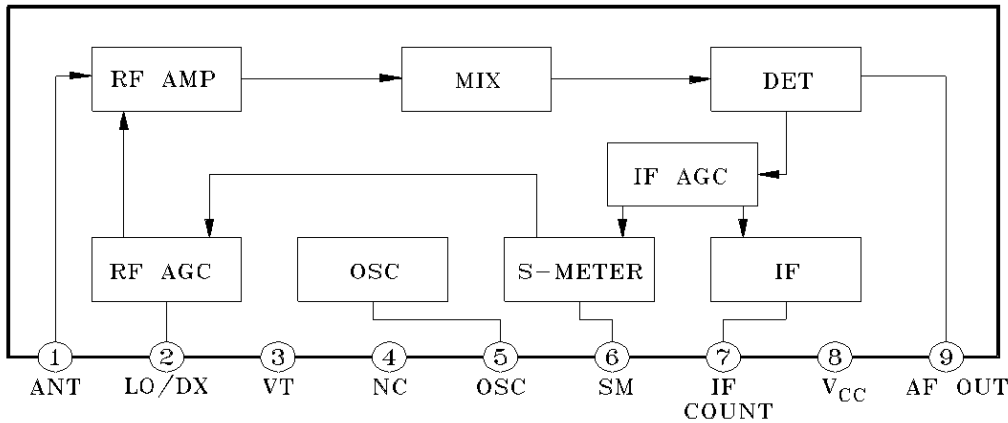
FEATURES

- Compact 3-Gang AM(MW/LW) Electronic Tuner.
- Upper Side Band Super Heterodyne System.
- Receiving Frequency : MW Band=520~1720kHz, LW Band=144kHz~281kHz.
- Recommended Operation Voltage : 7.3~9.0V
- Band Switch Voltage : MW(Min.)=7.0V, LW(Max.)=0.35V.

MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Power Supply Voltage	V _{CC}	10	V
Tuning Voltage	V _T	8	V
LO/DX Voltage	V _{AGC}	6	V
Operating Temperature Range	T _{opr}	-20~70	°C
Storage Temperature Range	T _{stg}	-30~80	°C

BLOCK DIAGRAM



KCA □ □ □ □ □

TYPE No.

A : * TOKO AL TYPE FILTER
H : * MURATA H TYPE FILTER

U : US BAND
E : EUROPE BAND

☞ KCA323 + MUTE : KCA343

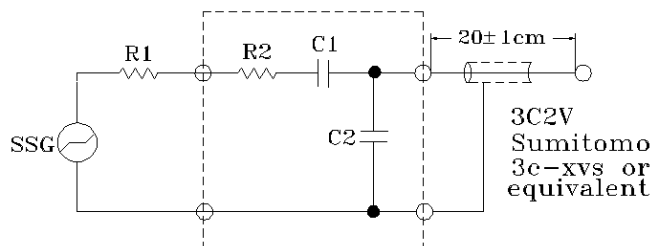
KCA323UA/UH/EA/EH

ELECTRICAL CHARACTERISTICS (MW BAND)

(Unless Otherwise Specified : $V_{CC}=8.2V$, $V_i=74dB\mu V$, $f_i=999kHz$, $Mod=30\%$, $f_m=400Hz$)

CHARACTERISTIC	TEST CONDITION	MIN.	TYP.	MAX.	UNIT (EMF)	
IF Frequency	UA/UH	448	450	452	kHz	
	EA/EH	457	459	461	kHz	
Maximum Sensitivity	Detected Output $20mV_{rms}$	-	20	25	$dB\mu V$	
Maximum Sensitivity Balance	520~1720kHz	-	5.0	10	dB	
Usable Sensitivity	S/N=20dB	-	26	33	$dB\mu V$	
S/N Ratio	at RF 999kHz	40	50	-	dB	
Image Rejection	at RF 1404kHz	50	55	-	dB	
IF Rejection	at RF 603kHz	55	-	-	dB	
2 IF Rejection	S/N at Input Level Signal $74dB\mu V$	25	30	-	dB	
Band Width	Detected Output -6dB	4.0	6.0	9.0	kHz	
SD Sensitivity	S.M=2Volt (at $7.5k\Omega$)	30	35	40	dB	
Selectivity	at RF 999kHz $\pm 9kHz$	40	-	-	dB	
AGC Effect	Input $74dB\mu V$, Reduce to AGC Level 10dB	45	50	-	dB	
AF Output Voltage	at RF 999kHz	120	150	180	mV	
OSC Output Voltage	$1k\Omega$ Load(rms)	250	320	-	mV	
LO/DX Reduction	LO/DX Terminal 5(V)	-15	-20	-25	dB	
THD	Mod=30%	-	0.3	1.0	%	
Over Modulation THD	Mod=80%	-	0.8	2.0	%	
Strong Signal Input THD	$120dB\mu V$, 400Hz, 30% Mod	-	0.3	1.0	%	
Fidelity	EXT. Modulation 400Hz 30% AF Output 0 dB Point	100Hz	-3.0	0	+3.0	dB
		4kHz	-10	-15	-20	
OSC V_{CC} Drift	at 8.2(V) $\pm 10\%$	-	± 1.0	± 5.0	kHz	
OSC Temperature Drift	Temp. Cycle $20^\circ C \pm 40^\circ C$	-	20	30	kHz	

DUMMY CONDITION



S.S.G : Standard
Signal Generator

R1 : SSG Output
Impedance

$R1+R2=80\Omega$

$C1=15pF$

$C2=65pF$

KCA323UA/UH/EA/EH

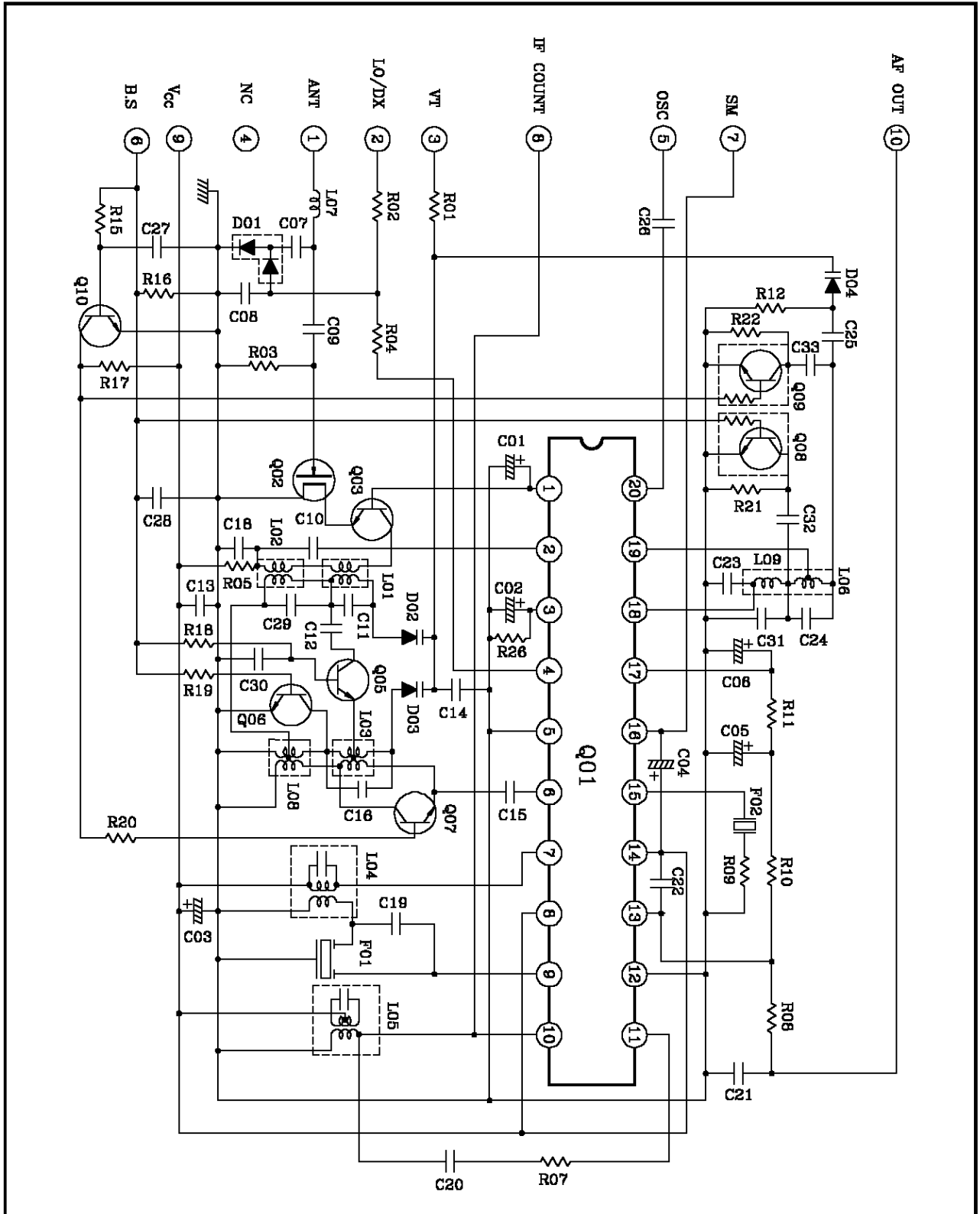
ELECTRICAL CHARACTERISTICS (LW BAND)

(Unless Otherwise Specified : $V_{CC}=8.2V$, $V_i=74dB\mu V$, $f_i=218kHz$, Mod=30%, $f_m=400Hz$)

CHARACTERISTIC	TEST CONDITION (164, 218, 281kHz)	MIN.	TYP.	MAX.	UNIT (EMF)	
Maximum Sensitivity	Detected Output $20mV_{rms}$	-	22	30	$dB\mu V$	
Maximum Sensitivity Balance	144~281kHz	-	5.0	10	dB	
Usable Sensitivity	S/N=20dB	-	28	35	$dB\mu V$	
S/N Ratio	at RF 218kHz	40	45	-	dB	
Image Rejection	at RF 281kHz	50	55	-	dB	
IF Rejection	at RF 164kHz	55	-	-	dB	
2 IF Rejection	S/N at Input Level Signal $74dB\mu V$	25	30	-	dB	
Band Width	Detected Output -6dB	4.0	6.0	9.0	kHz	
SD Sensitivity	S.M=2Volt (at $7.5k\Omega$)	30	35	40	dB	
Selectivity	at RF 218kHz $\pm 9kHz$	UA/EA	40	-	-	dB
		UH/EH	60	-	-	dB
AGC Effect	Input $74dB\mu V$, Reduce to AGC Level 10dB	45	50	-	dB	
AF Output Voltage	at RF 218kHz	120	150	180	mV	
OSC Output Voltage	$1k\Omega$ Load(rms)	250	320	-	mV	
LO/DX Reduction	LO/DX Terminal 5(V)	15	20	25	dB	
THD	Mod=30%	-	0.3	1.0	%	
Over Modulation THD	Mod=80%	-	0.8	2.0	%	
Strong Signal Input THD	$120dB\mu V$, 400Hz, 30% Mod	-	0.3	1.0	%	
Fidelity	EXT. Modulation 400Hz 30% AF Output 0 dB Point	100Hz	-3.0	0	+3.0	dB
		4kHz	-10	-15	-20	
OSC Vcc Drift	at 8.2(V) $\pm 10\%$	-	± 1.0	± 5.0	kHz	
OSC Temperature Drift	Temp. Cycle $20^\circ C \pm 40^\circ C$	-	20	30	kHz	

KCA323UA/UH/EA/EH

INTERNAL CIRCUIT



KCA323UA/UH/EA/EH

OUTLINE DIMENSIONS (Unit:mm)

