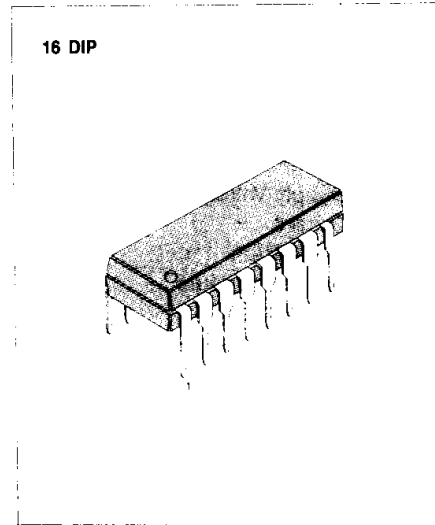


**VCO NON-ADJUSTING FM STEREO MULTIPLEX DECODER**

The KA2265 is a monolithic integrated circuit consisting of a VCO non-adjusting FM stereo demodulator with a phase locked loop. It is designed for use in home stereo, portable Hi-Fi.

**FEATURES**

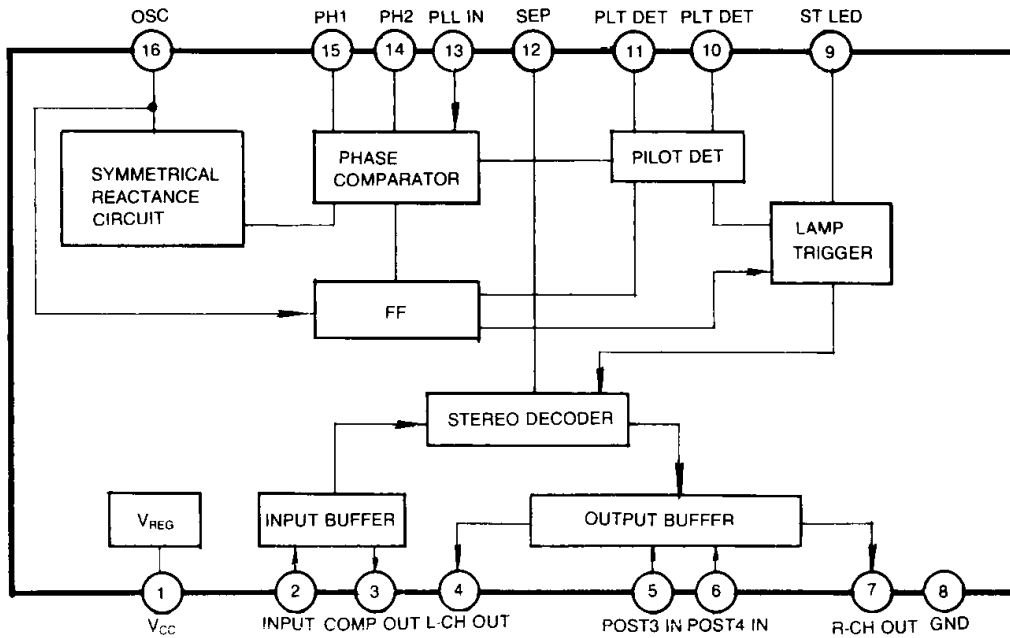
- Non-adjusting VCO: non-adjusting of free-running frequency.
- Excellent temperature characteristics of VCO:  $\pm 0.1\%$  (Typ) at  $\pm 50^\circ\text{C}$ .
- Excellent stereo high frequency distortion. ( $f=10\text{KHz}$ :  $0.06\%$  (Typ)).
- Excellent distortion:  $f=1\text{KHz}$ ,  $V_i=300\text{mV}$ , mono:  $0.025\%$  (Typ). stereo:  $0.02\%$  (Typ)
- High S/N:  $91\text{dB}$  (Typ) (mono  $V_i=300\text{mV}$ , LPF).  $92\text{dB}$  (Typ) (mono  $V_i=300\text{mV}$ , IHF BPF).
- High gain: about  $8.5\text{dB}$ .
- Wide dynamic range: mono  $800\text{mV}$  ( $f=1\text{KHz}$ ,  $\text{THD}=1\%$ )
- Good ripple rejection:  $34\text{dB}$  (Typ).
- Operating voltage range:  $V_{CC}=6.5\text{V} \sim 14\text{V}$



**ORDERING INFORMATION**

Device	Package	Operating Temperature
KA2265	16 DIP	$-20^\circ\text{C} \sim +70^\circ\text{C}$

**BLOCK DIAGRAM**



ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

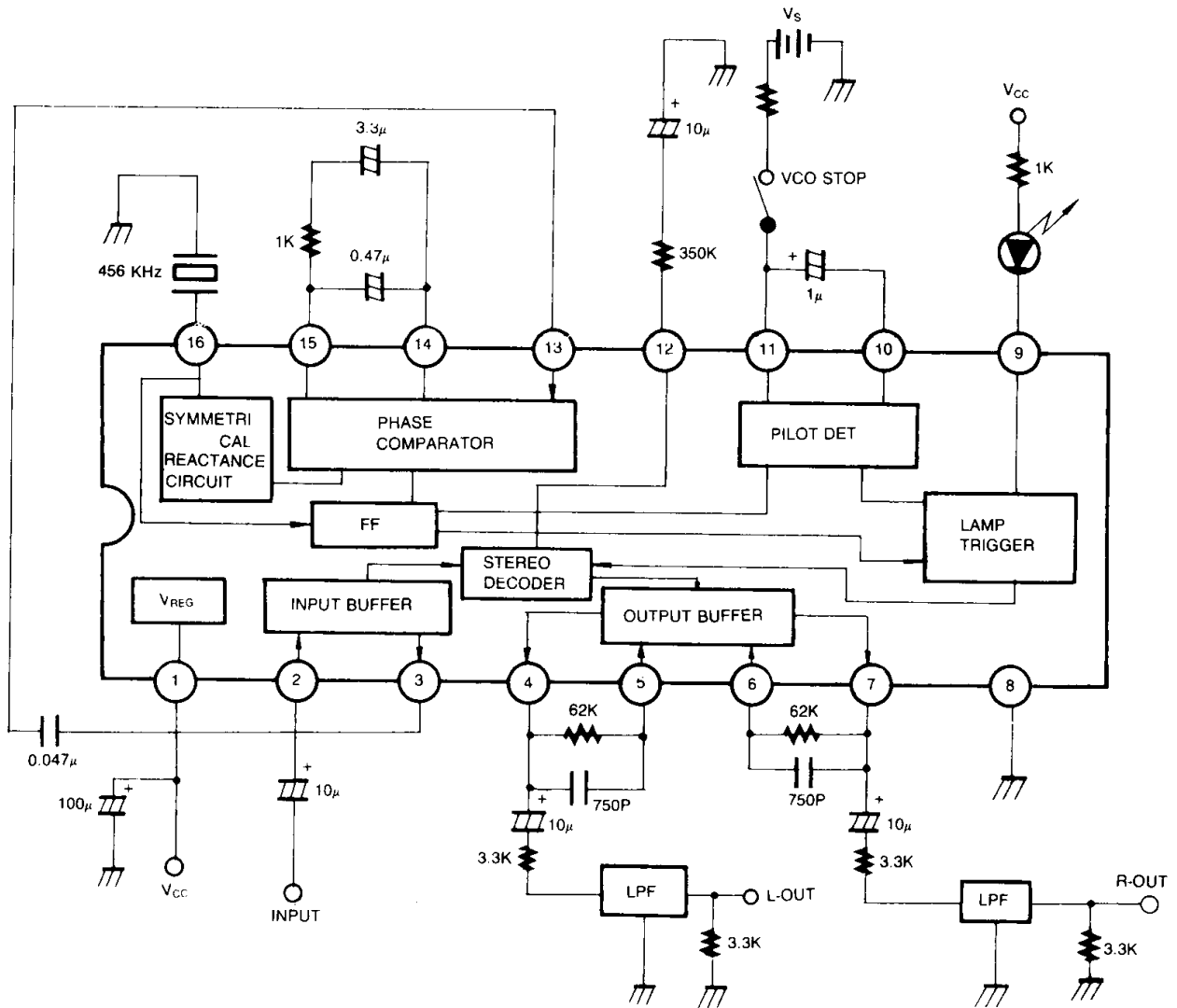
Characteristic	Symbol	Value	Unit
Power Supply Voltage	$V_{CC}$	16	V
Lamp Current	$I_{LAMP}$	30	mA
Power Dissipation	$P_D$	480	mW
Operating Temperature	$T_{OPR}$	-20 ~ +70	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-40 ~ +125	$^\circ\text{C}$

## ELECTRICAL CHARACTERISTICS

( $V_{CC} = 12\text{V}$ ,  $f = 1\text{KHz}$ ,  $T_a = 25^\circ\text{C}$ , unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Circuit Current	$I_{CC}$	$V_I = 0$		18.5	28	mA
Channel Separation	CS	$P = 30\text{mV}$ , $L + R = 270\text{mV}$		45		dB
		$f = 1\text{KHz}$	40	55		
		$f = 10\text{KHz}$		42		
Total Harmonic Distortion	Stereo THD 1	$P = 30\text{mV}$ $L + R = 270\text{mV}$		0.025	0.15	%
		$f = 100\text{Hz}$		0.02		
		$f = 1\text{KHz}$		0.06	0.15	
	Mono THD 2	$V_I = 300\text{mV}$		0.025	0.15	
Output Voltage	$V_O$	$V_I = 300\text{mV}$	500	730	1000	mV
Channel Balance	CB	$V_I = 300\text{mV}$		0	1	dB
Lamp ON Level	$V_{L(ON)}$	Pilot Level	4	8	17	mV
Lamp Hysteresis	HY			3		dB
Capture Range	CR	$P = 30\text{mV}$		+0.8 -1.2		%
Signal to Noise Ratio	S/N	$V_I = 300\text{mV}$ $R_G = 5.1\text{K}\Omega$	80	91		dB
Input Impedance	$Z_i$			20		$\text{K}\Omega$
Maximum Input Level	$V_{I(MAX)}$	Mono, THD=1%	700	800		mV
Carrier Leakage	$V_{LKG}$	$P = 30\text{mV}$ , $L + R = 270\text{mV}$		31		dB
VCO Stop Voltage	$V_{STOP(VCO)}$		5.5		$V_{CC} - 3$	V
Ripple Rejection Ratio	RR			34		dB

TEST CIRCUIT



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