

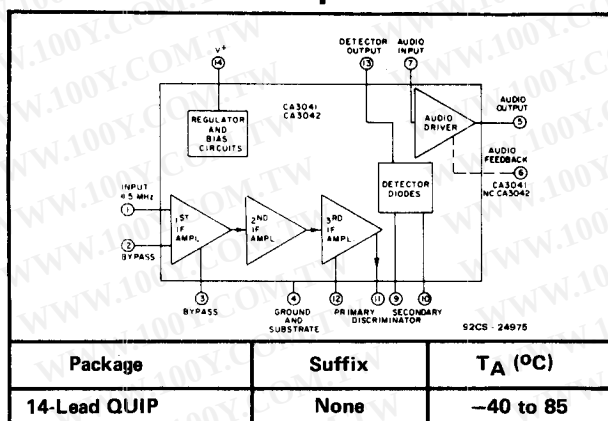
TV SOUND IF CIRCUITS SUMMARIZED

Type	Characteristics						
	No. of IF Lim. Stages	Input Lim. Knee	Detector Type	Recovered Audio at Det.	Electronic Attenuator	Audio Voltage Gain	Audio Output Res.
CA2111A	3	250 μ V	Quadrature	720mV	No		2K Ω
CA3041	3	150 μ V	Discrim.	250mV	No	40dB	30K Ω
CA3042	3	150 μ V	(2 coils)	250mV	No	10dB	250 Ω
CA3065	3	200 μ V	Diff. Peak (1 coil)	750mV	80dB	20dB	270 Ω

Wide-Band Amplifier/Limiter/FM Detector/Audio Drivers

CA3041

CA3042



Applications and Features

For sound sections of TV receivers using:

Tube-type AF output amplifiers, (CA3041)

Transistor-type AF output amplifiers, (CA3042)

Inherent high stability, internally shielded

Internal Zener-diode-regulated voltage supply

Low total harmonic distortion (THD) High-audio-drive capability

Wide frequency range: <100kHz to >20MHz

Typical Electrical Characteristics at $T_A = 25^\circ\text{C}$

Voltage Gain:

IF Amplifier (both types) at 4.5MHz 67 dB

AF Driver (CA3041) at 1kHz 41 dB

AF Driver (CA3042) at 1kHz 30 dB

Input Limiting Voltage (knee) at 4.5MHz 150 μ V rms

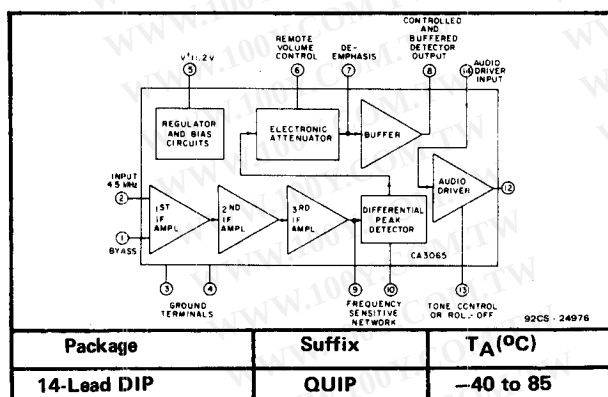
AM Rejection at 4.5MHz 58 dB

Total Harmonic Distortion at 4.5MHz 1.5 %

File Nos. 318, 319*; ICAN-5841, 5765*

TV Sound System

IF Amplifier/Limiter/FM Detector/Electronic Attenuator/Audio Driver CA3065



Applications and Features

Sound IF amplifier

Differential peak (FM) detector:

requires one single-tuned coil

Electronic attenuator: replaces

sound system volume control

Audio driver

Internal Zener-diode supply-voltage regulator

Audio drive capability: 6mA p-p

Undistorted audio output

voltage: 7V p-p

Low total harmonic distortion

Typical Electrical Characteristic at $T_A = 25^\circ\text{C}$

Audio Voltage Gain 20 dB

Input Limiting Voltage at 4.5MHz 200 μ V

Recovered AF Voltage 0.75 V rms

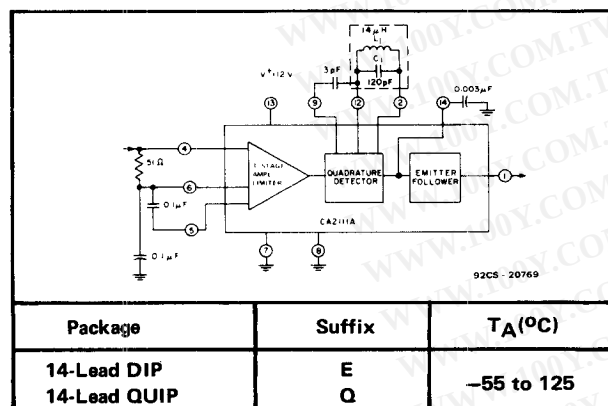
AM Rejection at 4.5MHz 50 dB

Audio Attenuation 80 dB

File No. 412*

TV or FM IF Amplifier-Limiter/Quadrature Detector

CA2111A



Applications and Features

Sound if amplifier and quadrature

detector for both TV and FM

receiver applications

Single-coil tuning

Direct replacement for types

ULN-2111A and MC1357

Typical Dynamic Characteristics at $T_A = 25^\circ\text{C}$, $V^+ = 12\text{V}$

fo -	4.5MHz	5.5MHz	10.7MHz	Units
Δf -	$\pm 25\text{kHz}$	$\pm 50\text{kHz}$	$\pm 75\text{kHz}$	
Amplifier Voltage Gain ($V_{IN} \leq 50\mu\text{V rms}$)	60	60	53	dB
AM Rejection ($V_{IN} = 10\text{mV rms}$)	36	40	45	dB
Input Limiting Voltage	250	250	400	$\mu\text{V rms}$
Recovered AF Voltage	720	1200	500	mV rms
Total Harmonic Distortion	3	5	1.4	%

File No. 612*

*Refer to indicated File No. for data bulletin and where given to indicated ICAN No. for application note.

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