

Product Brief

TDA 4362

The Weatherband IC

The TDA 4362 is an integrated Dual-Conversion-AM-Receiver.



Potential Application

- Car radios

Features

- High flexibility with external preamplifier
- 2 symmetrical or asymmetrical mixer inputs
- 2-pin-Oscillator for the 1st LO
- 1st LO with LC-tank circuit
- 1st LO, 60 to 160 MHz range
- Low narrow band noise
- Divider for 1st LO by 2, 4, 6, 8, 10, 12
- Integrated AGC generation for the prestages
- Strictly symmetrical RF path
- Decoupled direct and divided counter outputs
- 2nd LO with quartz or external source
- Output for gain controlled 2. IF
- FM-coincidence demodulator
- Two inputs for the 2nd IF-stage

Price Projection

- Standard price list
- For Key and Focus accounts or high volumes you may contact your regional Siemens sales partner

Development and Support Tools

- Application Board TDA 4362 and 4362X

Features	Benefits
One IC for global LW/MW/SW reception	World radio
Supports US weather band (WB) services	Substitutes expensive modules
AM up/down conversion concept	Alignment free
Dual mixer input for AM and WB	No need for switching diodes

Packing

Type	Ordering Code	Package
TDA 4362	Q67007-A5228	P-MQFP-44-2
TDA 4362X	Q67007-A5238	P-DSO-28-1

Documentation	Date of Issue/Version
Specification	4/98
Application (TDA 4362)	1/98

The pin diagram shows the TDA7490M IC with various pins and their connections. Key components and connections include:

- Power and Reference:** $+V_{Ref}$ at pin 1, $+V_S$ at pins 39 and 36, and V_{Ref} at pin 7.
- Inputs:** $IN1/IN2$ at pins 8 and 39, $IN1$ at pin 2, $IN2$ at pin 5, and $IF2out$ at pin 36.
- Outputs:** $VPrestage$ at pin 43, $IPrestage$ at pin 38, $IFout$ at pin 39, $STDBY$ at pin 32, AGC at pin 23, $AM-Stereo Decoder$ at pin 28, $STS Out STS-C$ at pin 41, and $Standby$ at pin 27.
- Internal Blocks:** Prestage AGC, AGC, AM-Stereo Decoder, and STS-C.
- External Components:** Capacitors (C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100), inductors (L1, L2, L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L13, L14, L15, L16, L17, L18, L19, L20, L21, L22, L23, L24, L25, L26, L27, L28, L29, L30, L31, L32, L33, L34, L35, L36, L37, L38, L39, L40, L41, L42, L43, L44, L45, L46, L47, L48, L49, L50, L51, L52, L53, L54, L55, L56, L57, L58, L59, L60, L61, L62, L63, L64, L65, L66, L67, L68, L69, L70, L71, L72, L73, L74, L75, L76, L77, L78, L79, L80, L81, L82, L83, L84, L85, L86, L87, L88, L89, L90, L91, L92, L93, L94, L95, L96, L97, L98, L99, L100), and other components (SW1, SW2, AGC AFout Time).

The diagram illustrates the internal components of a radio receiver, specifically for the BB 914 model. The circuit is organized into several functional blocks:

- FM Input Stage:** Receives FM signals and includes a variable capacitor (represented by a black rectangle with a diagonal line) and a diode (represented by a triangle pointing right). It is associated with components BA 885 or BA 595.
- Tuned Input Filter:** A blue rectangular block associated with components BB 804 or BB 814 or BB 914.
- Prestage:** A blue rectangular block containing a diode symbol, associated with components BF 1012 or BF 1009 or BF 998.
- Tuned Filter:** A blue rectangular block associated with components BB 804 or BB 814 or BB 914.
- Demodulation and Processing:** A large blue rectangular block containing:
 - FM-Tuner
 - FM-IF
 - Stereo Decoder
 - Noise Blancer
- AGC (Automatic Gain Control):** A feedback line from the FM input stage and the Tuned Filter block connects to the AGC input of the AM WB IC.
- AM Input Stage:** A blue rectangular block containing a diode symbol, labeled "Prestage". It is associated with components J-FET + BC 848C. It receives AM signals and has an AGC input from the Tuned Filter block.
- AM WB IC (AM Wideband IC):** A blue rectangular block that receives input from the AM Input Stage and the AGC line. It produces the AF (Audio Frequency) output.
- TDA 4362:** A pink rectangular block that receives input from the AM WB IC.
- Oscillator Tank Circuit AM:** A blue rectangular block at the bottom that receives input from the TDA 4362.

The overall output of the receiver is the AF (Audio Frequency) signal, which is sent to the AF output terminal.

The diagram illustrates the internal components of the TDA 4362 IC, which are housed within a pink rectangular box. The components include:

- WB Down Conv. Mixer** (top left)
- AM Up Conv. Mixer** (bottom left)
- 1.LO** (center)
- Down Conv. Mixer 2.LO** (top right)
- AM/FM Demodulator** (bottom right)

The signal flow is as follows:

- An input signal enters from the left and splits to feed both the **WB Down Conv. Mixer** and the **AM Up Conv. Mixer**.
- The output of the **WB Down Conv. Mixer** is sent to the **Audio Processor**.
- The output of the **AM/FM Demodulator** is also sent to the **Audio Processor**.
- The **Audio Processor** outputs to the **Audio Power** block.
- A control line connects the **Micro-Controller** to the **TDA 4362** IC, specifically to the **1.LO** block.

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