

inTune™

Adaptive DSP Amplifier

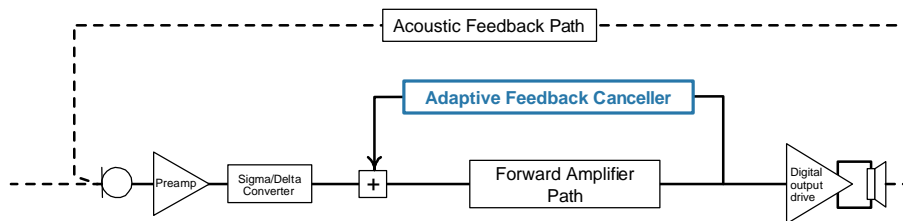
Completely Adaptive to Life - A New Standard for DSP Amplifiers

Adaptive Directionality Switching

- Automatically adapts from Omni to Directional when environment changes
- Eliminates extra 'directional' user program and need for user activation

Advanced Adaptive Feedback Cancellation*

- **17-22 dB Added Stable Gain** depending on application
- Adds about **15 dB more fitting range** than our previous generation of AFC
- Even less entrainment - Won't distort music and other multi-tonal inputs.
- Doesn't reduce gain like conventional adaptive notch filters.
- Works on all frequencies simultaneously.



Layered Noise Reduction™

- Syllabic layer reduces noise that is embedded in speech.
- Environment layer slowly reduces noise when no speech is present.
- Quick-Recovery layer gives noise reduction with fast recovery for speech onset.
- All layers respond to noise of all intensities - outperforms low-level expansion.
- Programmable selection to maximize comfort or maximize speech quality.



Powerful Dynamic Contrast Detection™ Compression

- Three-mode adaptive time constants to optimize AGC performance in critical environments

Programmable Tone Generator

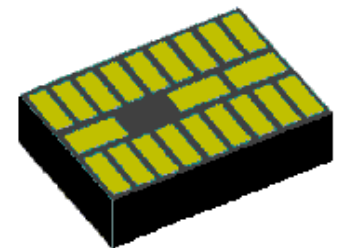
- Perfect for in-situ fitting procedures

Programmable VC Range and Taper

- Customize VC performance at design, manufacturing or fitting time.

M-T Input Mode and Telecoil Switch Function

Programmable Power-on Delay



PCB Hybrid for Reflow and Hand-wire Applications - also available in **RoHS-compliant** version



1260 Red Fox Road • Arden Hills, MN 55112 • TEL: (651) 636-9770 • FAX: (651) 636-8944
Kesselschmiedstraße 10 • D-85354 Freising, Germany • TEL: 049-8161-4804-0 • FAX: 049-8161-4804-18
www.intricon.com © 2006 IntiCon Corp. • *Patent Pending • Revised: October 9, 2006

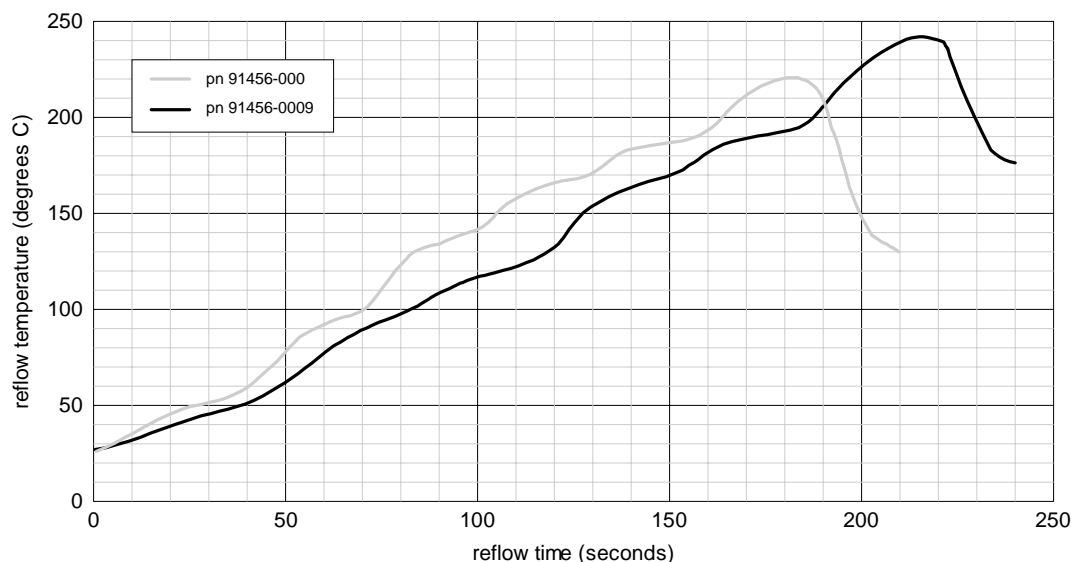
Parametric Data

parameter	minimum	typical	maximum	units	condition
minimum operating supply voltage	1.05	--	--	V	
maximum operating supply voltage	--	--	1.5	V	
supply current, AFC on	--	870	--	uA	see note 1
clock frequency	2.534	2.560	2.586	MHz	
sampling frequency	--	16	--	kHz	
bandwidth	--	8	--	kHz	
input noise	--	4	--	uV	bandwidth 200-8Khz
dynamic range	--	84	--	dB	max input signal with THD < 2%
output impedance	--	10	--	ohms	
maximum output drive current	--	--	25	mA	
input impedance	385	550	715	ohms	
regulator voltage	0.89	0.95	1.05	V	120uA load
maximum regulator current	100	--	--		
PSRR	35	50	--	dB	
Power on Reset Threshold Voltage	0.55	0.7	0.85	V	

note 1: AFC turned on. 2kHz pure tone input at 200 uVrms amplitude.

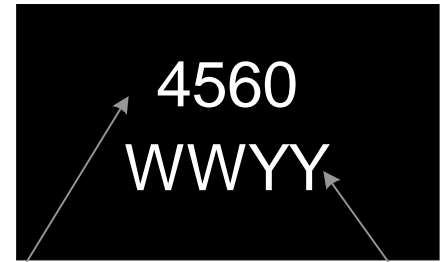
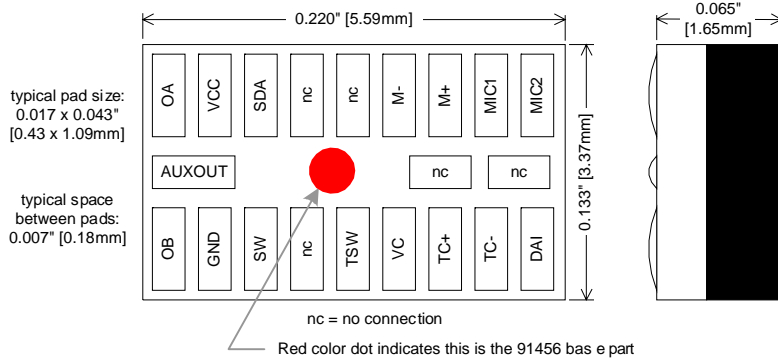
Soldering Information

IntriCon Hybrid part number	Customer Attach process	Process Parameters	Max Hybrid Temp	Recommended materials to attach hybrid
91456-0009	Hand solder wire	Set iron tip temp to 650-715 F. Max dwell time of 2 second. Allow 10 seconds between solder operations	250 C	Use SAC 305 solder wire
91456-0009	Flip Chip	Reflow in convection oven – See profile below for recommended reflow temperature.	250 C	Print SAC 305 paste onto pads. Flip hybrid onto wet paste and reflow. Alternate method is to apply flux to the pads then flip hybrid onto fluxed pads and reflow. Recommended flux is Indalloy tac flux 009 (this is a water soluble flux.)
91456-000	Hand solder wire	Set iron tip temp to 600-650 F. Max dwell time of 2 second. Allow 10 seconds between solder operations	225 C	Use Sn62, Pb36,Ag2 solder wire Or Sn63, Pb37 solder wire
91456-000	Flip Chip	Reflow in IR or Convection oven - See profile below for recommended reflow temperature	225 C	Print Sn62, Pb36, Ag2 or Sn63, Pb37 paste onto pads. Flip hybrid onto wet paste and reflow. Alternate method is to apply flux to the pads then flip hybrid onto fluxed pads and reflow. Recommended flux is Indalloy tac flux 009 (this is a water soluble flux.)



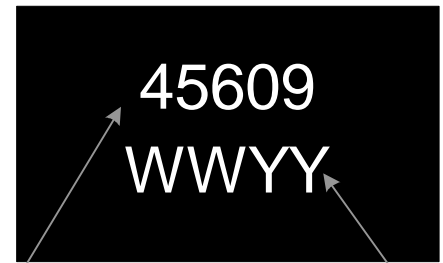
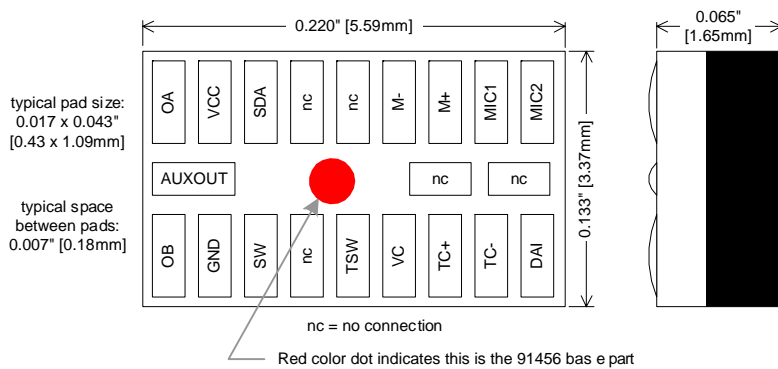
PCB Hybrid Package Information

part number 91456-000 - non RoHS compliant



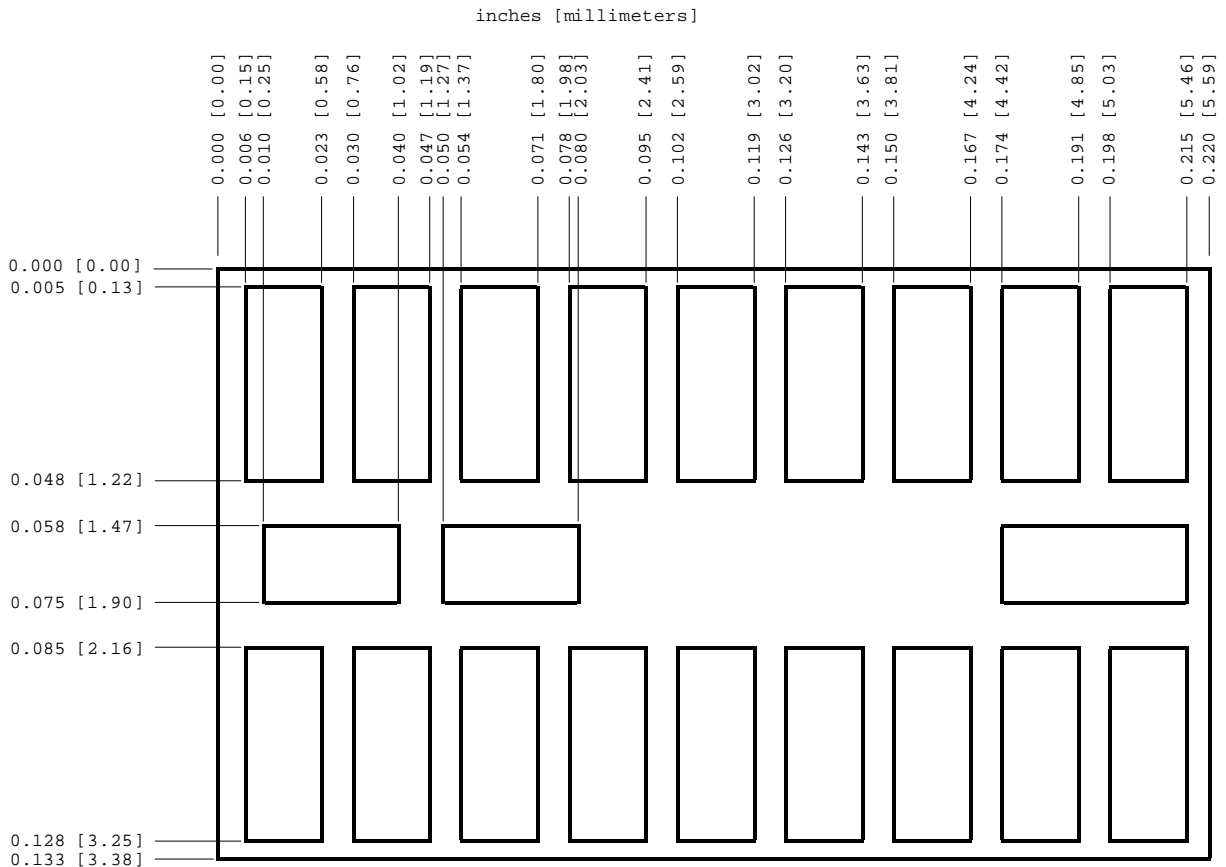
Abbreviated Part Number
Date Code:
WW = week number
YY = year

part number 91456-0009 - RoHS compliant

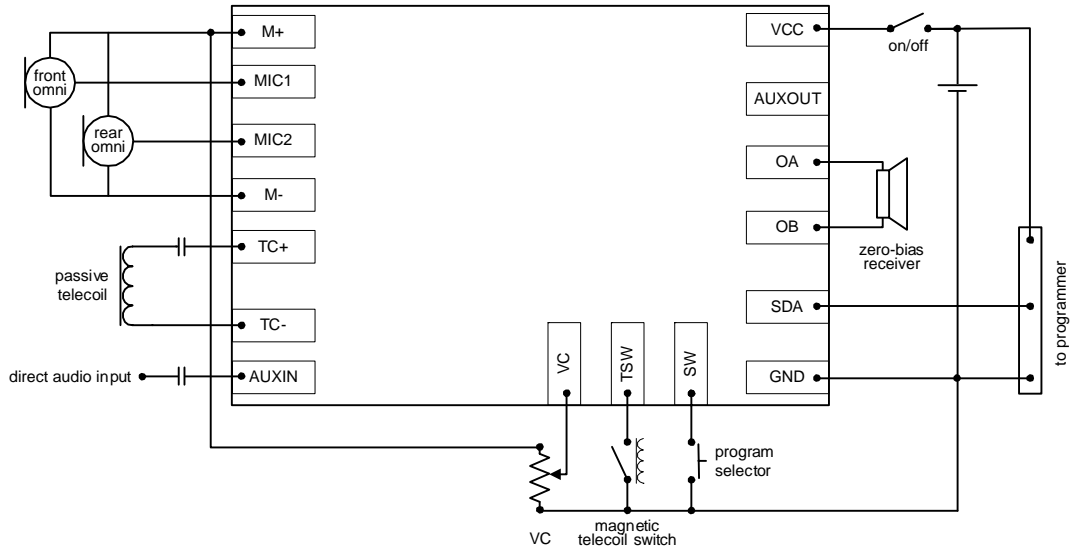


Abbreviated Part Number
Date Code:
WW = week number
YY = year

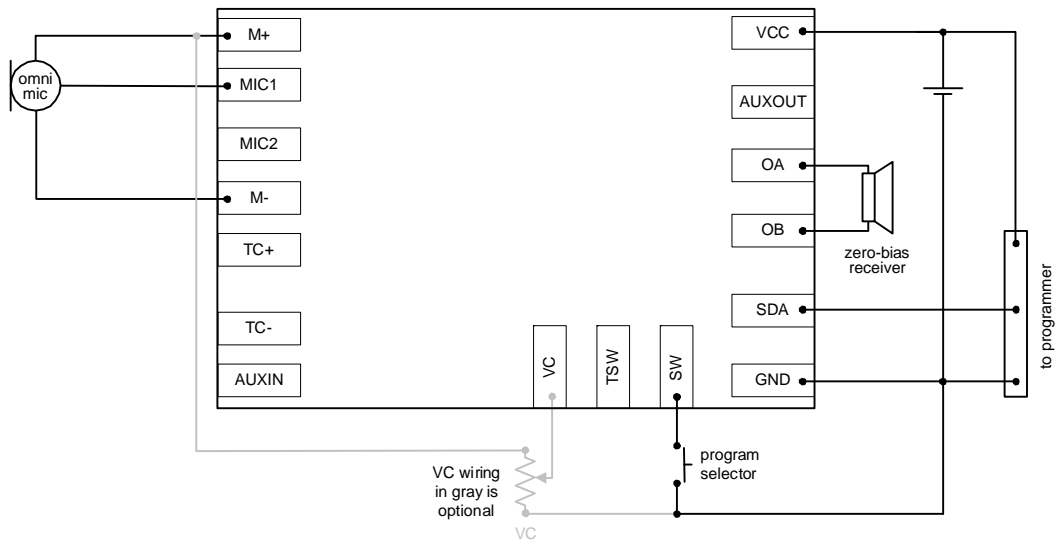
Detail of Pad Positions



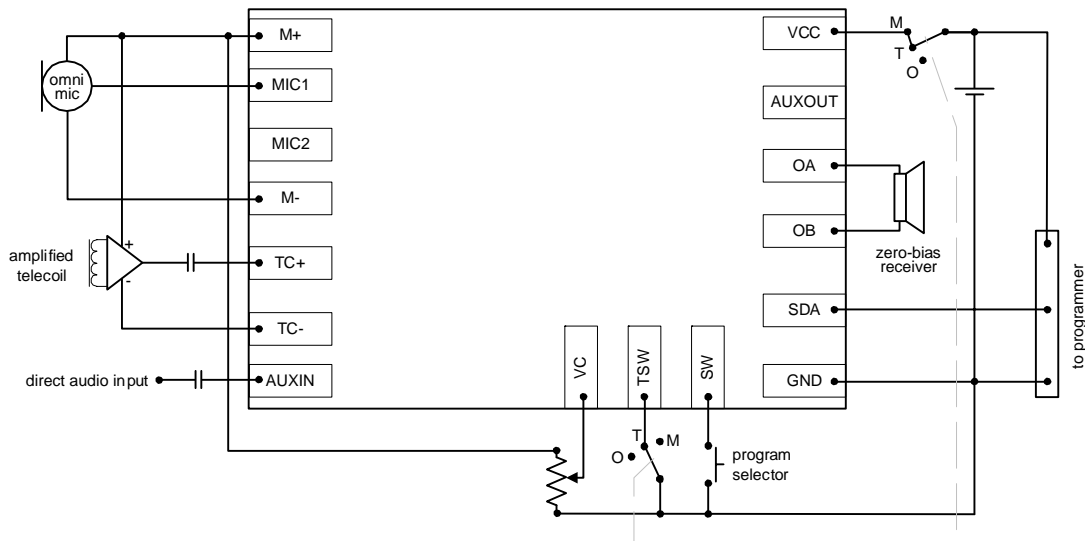
Wiring Schematic showing full features



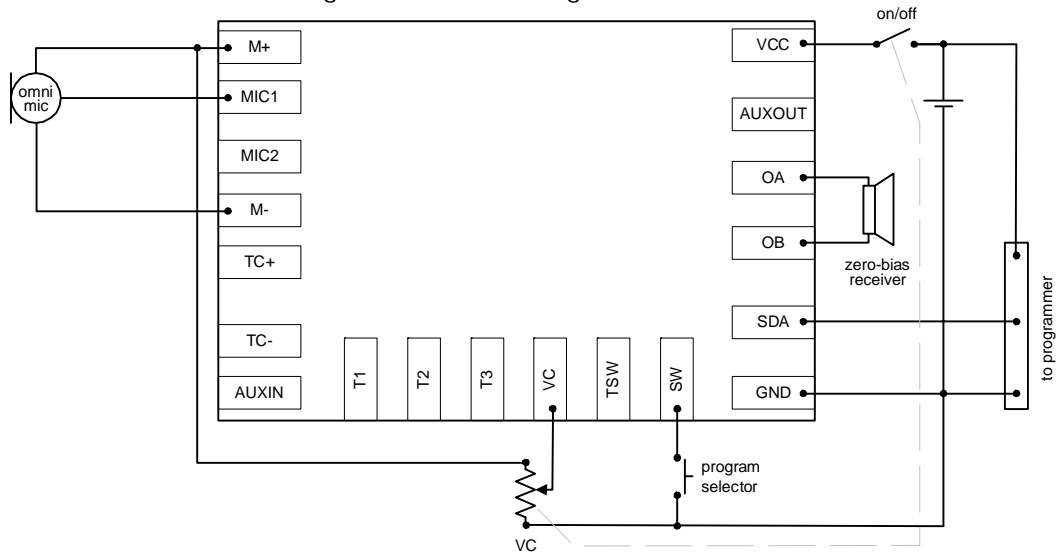
Wiring Schematic for simple programmable application



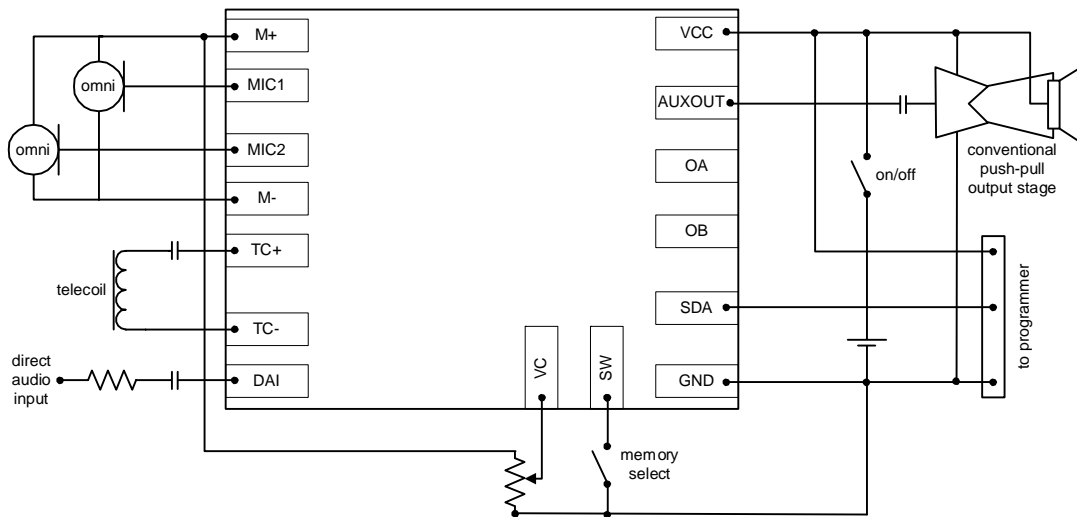
Wiring Schematic with Active Tcoil, VC, DAI, and MTO switch



Wiring Schematic showing VC with Switch



High Power Application using Conventional Class B Output Stage



Programmer Wiring

Pin numbering of the DIN connector on the front of the HiPro, as seen facing the HiPro box

