

# Digital-ONE™ 2CT

Programmable 2-channel DSP Hybrid  
with Trimmer Capability

## Fully Programmable Multi-memory DSP Amplifier

## Two-Channel WDRC with Dynamic Contrast Detection™

- Better performance in noise and conversation
- Select from a wide range of time-constant options

## High Performance Shaping Filters for Optimal Target Matching

- 6, 12 or 18 dB / octave Low-cut Filter
- 12 dB / octave High-cut Filter
- equalizer-style band gain adjust for fine tuning
- adjustable feedback removal notch

## Digital Trimmer Capable

- up to 4 programmable trimmers
- control from a selection from 10 parameters
- selectable Volume Control options

## Low Battery Warning Tone

- Alerts the wearer to the end of battery life.

## Wideband Output Compression Limiting

- maximize comfort in loud environments with adjustment of 'MPO' limiting threshold

## Program Switch Tones

- Helps wearer to identify user programs.

## Auxilliary Analog Output Pin

- For use with external High Power output stage.

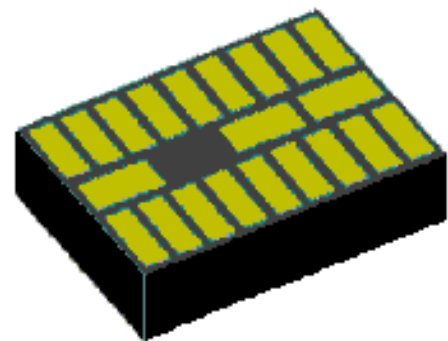
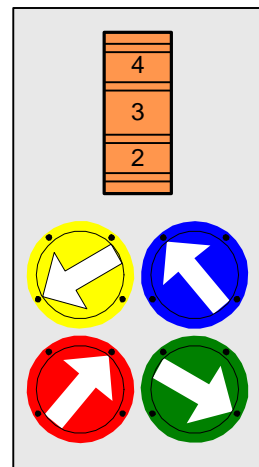
## Programmable Input Selector

- use up to 3 inputs for omni mic, directional mic, telecoil and direct audio input

## Compact Reflowable PCB Hybrid Style

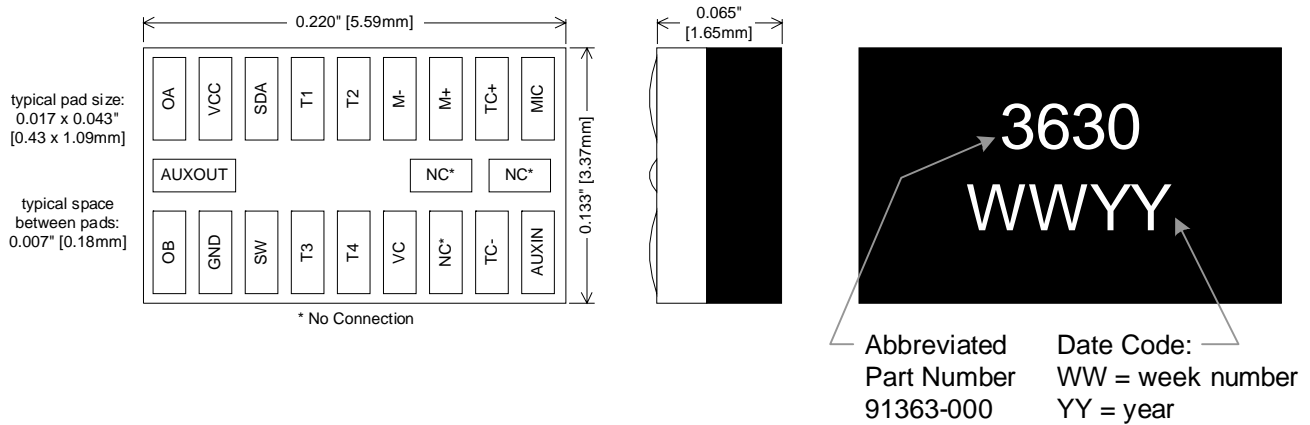
- 0.220 x 0.133 x .065" [5.6 x 3.4 x 1.7 mm]

Perfect for All Reflow Applications or Hand-wire Applications.

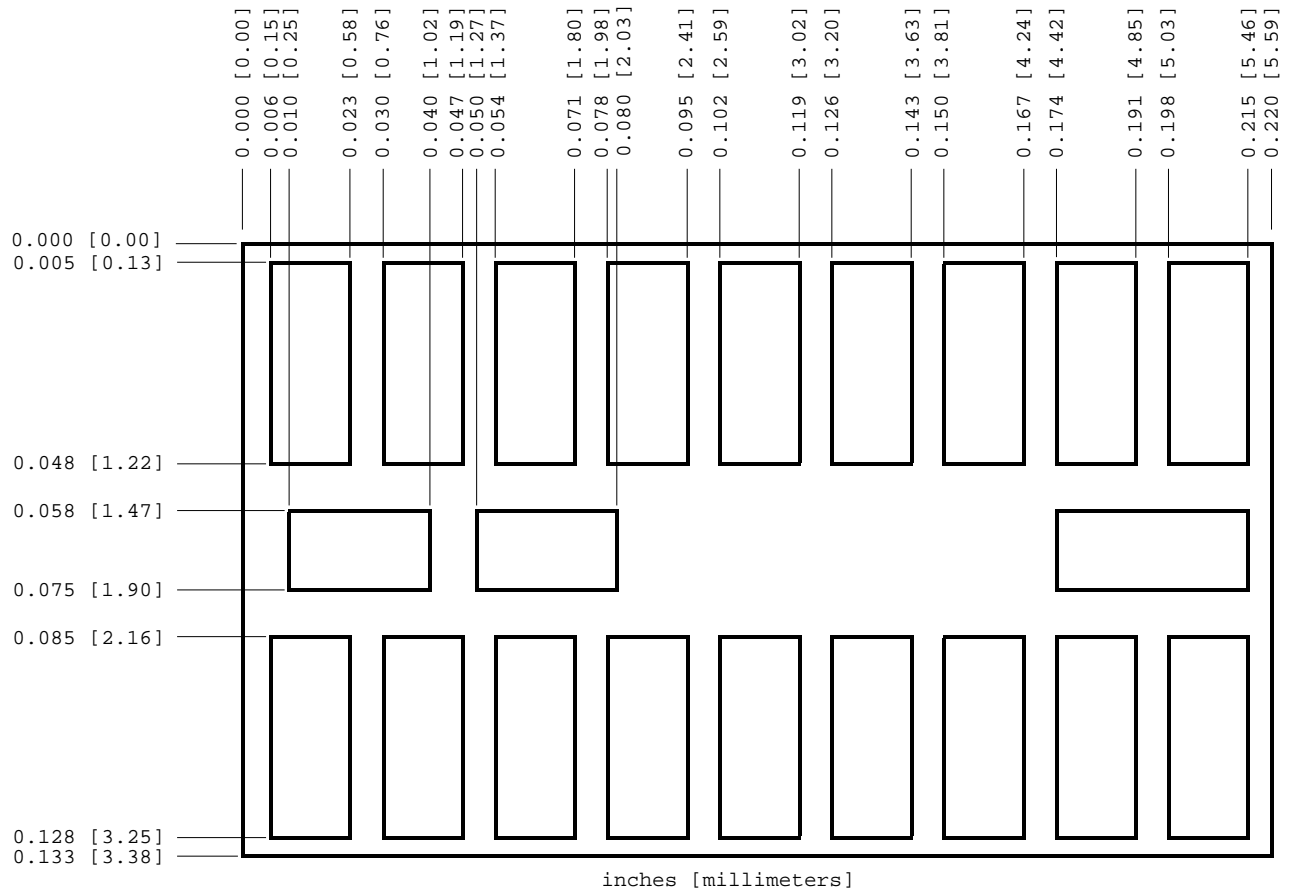


## Hybrid Package Information

Part number 91363-000



## Detail of Pad Positions



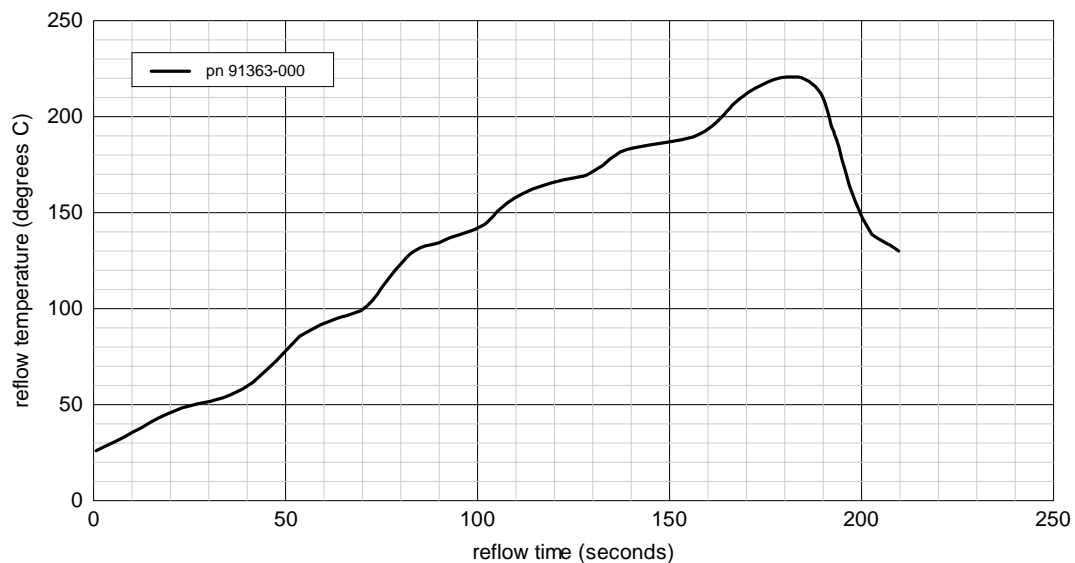
## Parametric Data

parameter	minimum	typical	maximum	units	condition
minimum operating supply voltage	1.05	--	--	V	
maximum operating supply voltage	--	--	1.5	V	
supply current	--	660	--	uA	see note 1
clock frequency	--	1.280	--	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	kohms	
regulator voltage	0.89	0.95	1.05	V	120uA load
maximum regulator current	100	--	--	uA	
PSRR	35	50	--	dB	
Power on Reset Threshold Voltage	0.55	0.7	0.85	V	

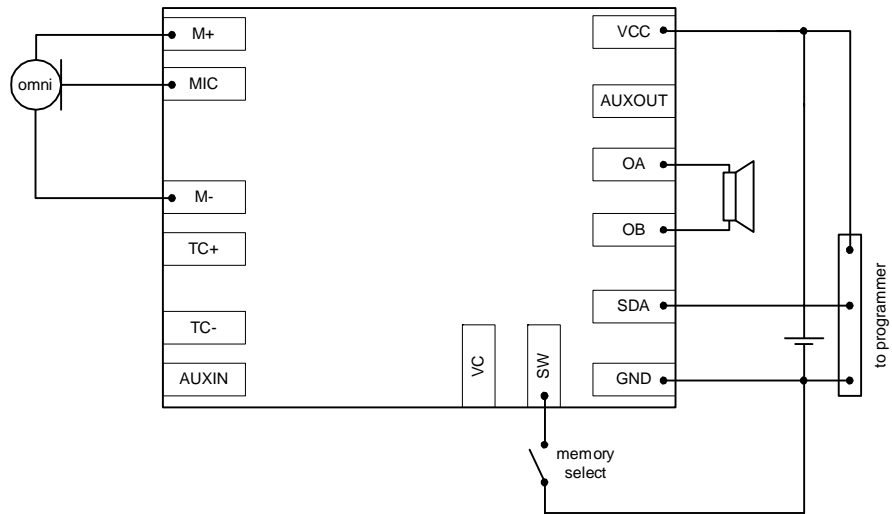
note 1: 2kHz pure tone input at 200 uVrms amplitude. No load on pads OA and OB.

## Soldering Information

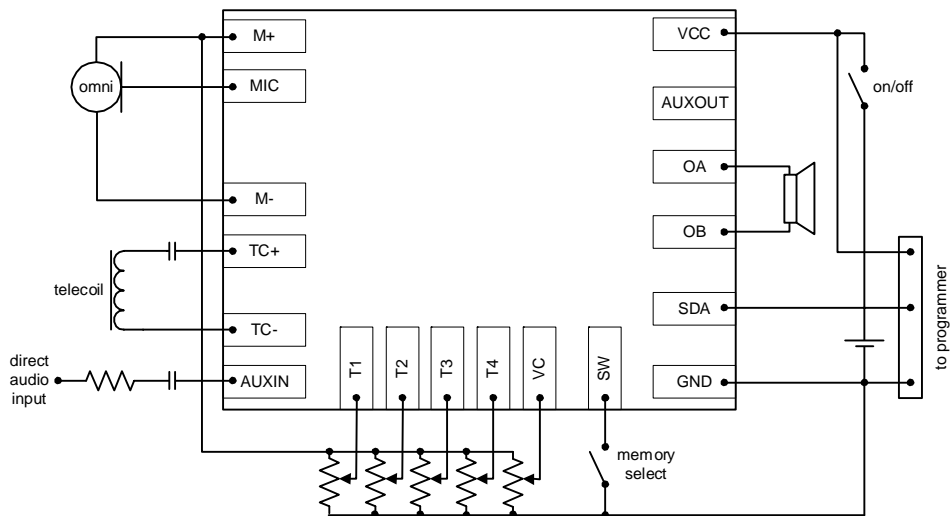
IntriCon Hybrid part number	Customer Attach process	Process Parameters	Max Hybrid Temp	Recommended materials to attach hybrid
91363-000	Hand solder wire	Set iron tip temp to 600-650 F. Max dwell time of 2 second. Allow 10 seconds between solder operations	225 C	Use Sn62, Pb36,Ag2 solder wire Or Sn63, Pb37 solder wire
91363-000	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.)



Wiring Schematic for Simple CIC Configuration



Typical Wiring Schematic for Full Features



High Power Application using Conventional Class B Output Stage

