Digital TV Demodulator for ISDB-T/S
MN884433

Overview
MN884433 is demodulator LSI for terrestrial and BS/CS broadcasts. It supports the broadcast specifications of Japan, South America and others, performing demodulation and error correction and outputting transport streams (TS).

Features
- Simultaneous reception of digital terrestrial (ISDB-T) and digital BS/CS (ISDB-S)
- Built-in ADC (A/D converter) and deinterleave memory
- Built-in I²C bus-compliant CPU interface circuit and tuner control circuit

Applications
(Digital terrestrial and digital BS/CS reception system in Japan)
### Specifications

<table>
<thead>
<tr>
<th>Function</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Package</strong></td>
<td>TQFP 100-pin</td>
</tr>
<tr>
<td></td>
<td>Size: 12 mm x 12 mm</td>
</tr>
<tr>
<td></td>
<td>Lead pitch: 0.4 mm</td>
</tr>
<tr>
<td><strong>Supply Voltage</strong></td>
<td>For external: 3.3V</td>
</tr>
<tr>
<td></td>
<td>For Internal: 1.2V</td>
</tr>
<tr>
<td><strong>Input</strong></td>
<td>Terrestrial: Low-IF or High-IF</td>
</tr>
<tr>
<td></td>
<td>BS/CS: IQ</td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td>TS Serial / Parallel</td>
</tr>
<tr>
<td><strong>CPU interface</strong></td>
<td>I²C bus</td>
</tr>
</tbody>
</table>

#### ISDB-T
- **Bandwidth**: 6, 7, 8 MHz
- **FFT size**: 2K (Mode1), 4K (Mode2), 8K (Mode3)
- **Guard interval length**: 1/32, 1/16, 1/8, 1/4
- **Carrier modulation scheme**: QPSK, 16QAM, 64QAM, DQPSK
- **Convolutional-coding rate**: 1/2, 2/3, 3/4, 5/6, 7/8

#### ISDB-S
- **Symbol rate**: 28.86 Mbaud
- **Modulation scheme**: 8PSK, QPSK, BPSK
- **Convolutional-coding rate**:
  - 8PSK: 2/3
  - QPSK: 1/2, 2/3, 3/4, 5/6, 7/8
  - BPSK: 1/2

### Block Diagram

![Block Diagram](image-url)