# AN6342N

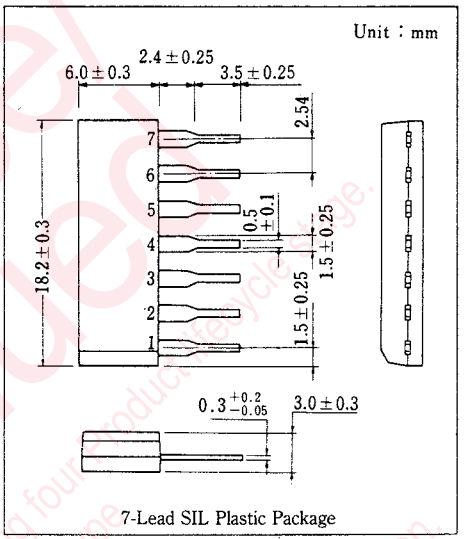
## VTR Reference Frequency Divider

### ■ Outline

The AN6342N is an integrated circuit designed for VTR's reference frequency dividing.

### ■ Features

- The functions consist of:
  3.58MHz, 4.43MHz crystal oscillation
  Frequency divider circuit
- Divider ratio changeable either for NTSC system or PAL system
- Divider output frequency
  NTSC system 59.9Hz(3.58MHz)
  PAL system 50.0Hz(4.43MHz)
- Supply voltage either 9V or 12V

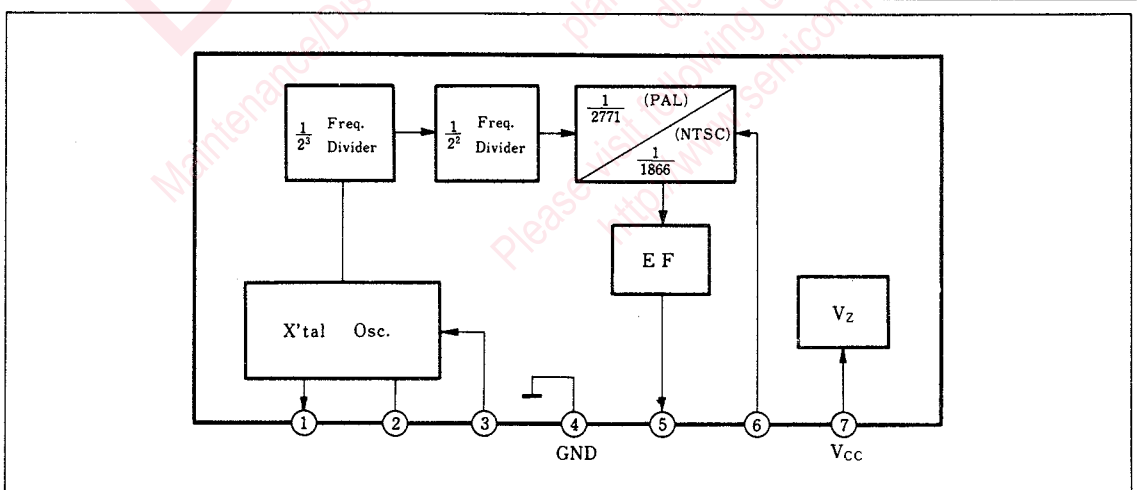



7-Lead SIL Plastic Package

### ■ Pin

| Pin No. | Pin Name |
|---|---|
| 1 | Osc. Output |
| 2 | X'tal Osc. |
| 3 | X'tal Osc. |
| 4 | GND |
| 5 | Divide Output |
| 6 | NTSC/PAL Select |
| 7 | $V_{CC}$ |

### ■ Block Diagram



## ■ Absolute Maximum Ratings (Ta=25℃)

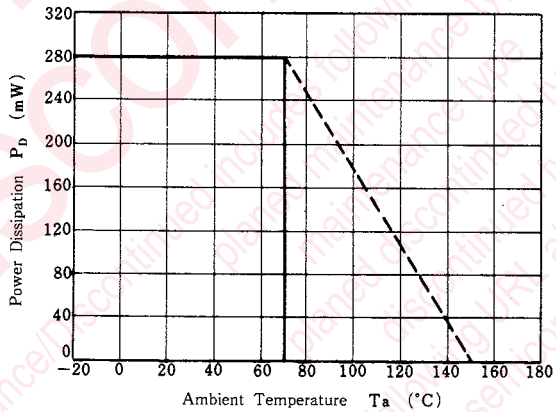
| Item | Symbol | Rating | Unit |
|---|---|---|---|
| Supply voltage | $V_{CC}$ | 12.5 | V |
| Supply current | $I_{CC}$ | 22.5 | mA |
| Power dissipation | $P_D$ | 280 | ℃ |
| Operating ambient temperature | $T_{opr}$ | −20～+70 | ℃ |
| Storage temperature | $T_{stg}$ | −40～+150 | ℃ |

## ■ Electrical Characteristics (Ta=25℃)

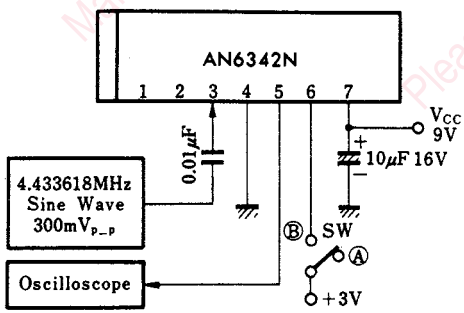
| Item | Symbol | Test Circuit | Condition | min. | typ. | max. | Unit |
|---|---|---|---|---|---|---|---|
| Total circuit current | $I_{tot}$ | | $V_{7-4}$=9V | 13 | | 21 | mA |
| Sensitivity(Divider Input) | $S_{(1)}$ | 1 | $V_{CC}$=9V | 400 | | | $mV_{P-P}$ |
| Sensitivity(N/P Switch) | $S_{(2)}$ | 1 | | 3 | | | V |
| High-level output voltage (Divider) | $V_{OH}$ | 1 | $V_{CC}$=9V | 4.5 | | | V |
| Low-level output voltage (Divider) | $V_{OL}$ | 1 | | | | 0.5 | V |
| Output voltage(X'tal Osc) | $V_O$ | 2 | $V_{CC}$=9V, 3.58MHz | 2.1 | | 2.8 | $V_{P-P}$ |

Note) Operating supply voltage $V_{cc(opr.)}$=8.8～12.5V

### $P_D$−Ta

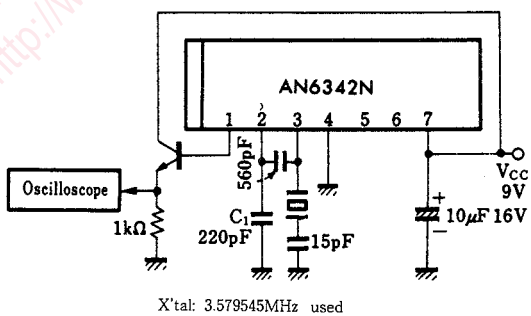



### Test Circuit 1 ($S_{(1)}$, $S_{(2)}$, $V_{OH}$, $V_{OL}$)



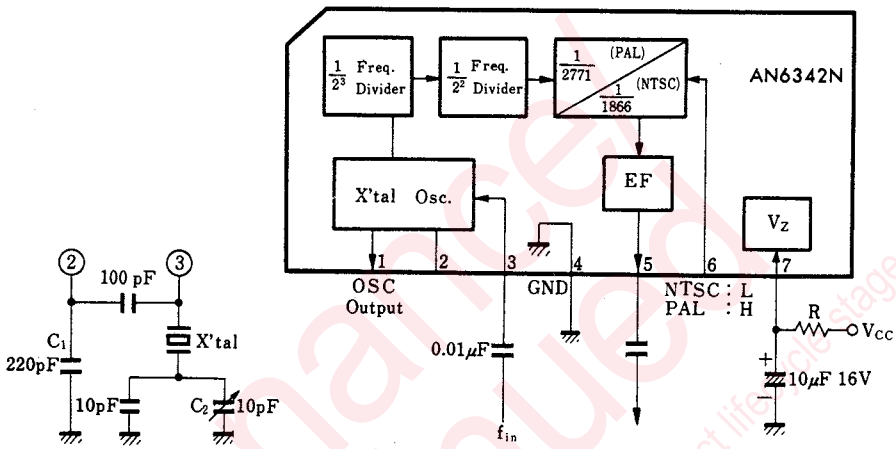

SW: Ⓑ when measuring N/P select input sensitivity $S_6$

### Test Circuit 2 ($V_O$)




X'tal: 3.579545MHz used

## ■ Application Circuit




| | f (MHz) | f. Divider Ratio | f. Divider Output (Hz) |
|---|---|---|---|
| NTSC | 3.579545 | 59712 | 59.9468 |
| PAL | 4.433618 | 88672 | 50.0002 |

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