

# F2F Decoder IC

## Triple track, BS300EP

*Low power consumption, best for portable hand-held devices*

### Features

- Low power : Current 0.65mA/2.7V ; 1.0mA/5V  
best for portable, hand-held devices.
- 0.8um CMOS ASIC IC for F2F magnetic stripe card reader.
- Built-in operational amplification circuitry.
- Operational power DC3.0V $\pm$ 10% /5.0V $\pm$ 10% automatic gain control.
- Two modes for RCP width. One is 14 ~ 60us. The other one is 1/4 RDP width.
- Power down mode for stand-by control.
- Support for 75/210 BPI recording density.
- Speed range: 300 to more than 12600 BIT/sec.
- Built-in Boarding Pass Ticket reading solution--- recovery for data lose.
- Small outline and surface mount design. LQFP48.



### Application

- Magnetic stripe card reader.
- POS Keyboard
- Security Control.
- CAT (Card Authorization Terminal)

### Specification

- Power Voltage: DC3.0V $\pm$ 10% /5.0V $\pm$ 10%
- Consumption: 0.65mA /DC 2.7V; 1.0mA /DC 5.0V

| SYMBOL | PARAMETER       | TEST CONDITIONS |      | MIN. | TYP. | MAX. | UNIT |
|--------|-----------------|-----------------|------|------|------|------|------|
|        |                 | OTHER           | VDD  |      |      |      |      |
| VDD    | Supply voltage  |                 |      | 2.7  |      | 5.5  | V    |
| Idd    |                 | VDD current     | 5V   |      | 0.8  | 1.0  | mA   |
|        |                 | VDD current     | 3V   |      | 0.6  | 0.75 | mA   |
|        |                 | VDD current     | 2.7V |      | 0.5  | 0.65 | mA   |
|        | Power down mode |                 |      |      |      | 15   | uA   |

- Reading Speed Range /second: 10cm/sec ~ 150cm/sec
- MTBF: 100,000 hrs
- Environment : Temperature: Operating: -10°C ~ 55°C; Storage: -30°C ~ 70°C  
Humidity: Operating: 10% ~ 90%; Storage: up to 100%
- Pin Assignment

| No | Signal  | No. | Signal  | No. | Signal  | No. | Signal | No. | Signal | No. | Signal |
|----|---------|-----|---------|-----|---------|-----|--------|-----|--------|-----|--------|
| 1  | NC      | 9   | OPB1OUT | 17  | MSIC+   | 25  | NC     | 33  | NC     | 41  | OSC    |
| 2  | OPA2OUT | 10  | OPB2IN  | 18  | MSIC-   | 26  | RDPB   | 34  | CLS    | 42  | RESEL  |
| 3  | OPA2IN  | 11  | OPB2OUT | 19  | OPC1OUT | 27  | RCPB   | 35  | NC     | 43  | IBS    |
| 4  | OPA1OUT | 12  | NC      | 20  | OPC2IN  | 28  | RDPC   | 36  | NC     | 44  | NC     |
| 5  | MSIA-   | 13  | NC      | 21  | OPC2OUT | 29  | RCPC   | 37  | NC     | 45  | VDD    |
| 6  | MSIA+   | 14  | NC      | 22  | NPWDN   | 30  | RDPA   | 38  | ADJ    | 46  | VCC    |
| 7  | MSIB+   | 15  | GND     | 23  | NC      | 31  | RDPA   | 39  | NRCPM  | 47  | NC     |
| 8  | MSIB-   | 16  | VREFIN  | 24  | NC      | 32  | VSS    | 40  | NC     | 48  | NC     |