DALLAS /MAXIM

DS3150
3.3V T3/E3/STS-1 Line Interface Unit

www.maxim-ic.com

REVISION B3 ERRATA

The errata listed below describe situations where DS3150 revision B3 components perform differently than expected or differently than described in the data sheet. Dallas Semiconductor intends to fix these errata in subsequent die revisions.

This errata sheet only applies to DS3150 revision B3 components. Revision B3 components are branded on the topside of the package with a six-digit code of the form yywwB3, where yy and ww are two-digit numbers representing the year and work-week of manufacture, respectively. To obtain an errata sheet on another DS3150 die revision, visit the website at www.maxim-ic.com/errata.

1. EXCESSIVE E3 OUTPUT JITTER

Description:
Measured E3 output jitter is marginal to or exceeds the limits specified in Section 4.2.1.4 of ETSI TBR 24. This issue only affects E3 operation. The DS3150 meets all DS3 and STS-1 jitter requirements.

Work Around:
Output jitter performance is voltage-dependent. Performance improves significantly when V_{DD} is less than 3.3V.

2. JITTER ATTENUATOR CAN HAVE INTERMITTENT START-UP PROBLEM

Description:
In some designs, when (1) the jitter attenuator is activated during operation, or (2) the device is powered up with the jitter attenuator enabled, occasionally (approximately one time in eight) the jitter attenuator does not initialize correctly and locks up the side of the LIU (Tx or Rx) in which it is mapped. When the transmitter is locked up it drives all 0s or a very small signal on Tx+/Tx-. When the receiver is locked up RCLK does not toggle. This erratum is application-dependent and is not observed in all designs.

Work Around:
To properly enable the jitter attenuator, follow this procedure:

```
/* data other than all 0s must be present on TPOS/TNRZ and TNEG*/
LBKS* = 0;                              /* enable analog loopback */
if (JA_side = transmit) {
    RMON = 0; TTS* = float;             /* enable jitter attenuator in transmit path */
}
elseif (JA_side = receive) {
    RMON = float; TTS* = 1;             /* enable jitter attenuator in the receive path */
}
```

```
while (LOS* = 0) {                                      /* jitter attenuator not initialized correctly */
    TDS0 = 0; TDS1 = 0; EFE = 0 or 1 (not float); LBO = float;   /* setup for test mode */
    EFE = float for 1µs;                                /* enable test mode reset */
    EFE = 0 or 1 (not float);                           /* exit test mode */
}
/* jitter attenuator initialized correctly */
/* set LBKS*, TDS0, TDS1, EFE, and LBO as needed for normal operation */
```