3. Electrical Specifications

3.1 Recommended Operating Conditions

Table 3-1. Recommended Operating Conditions

Parameter	Symbol	Min	Typ	Max	Units
Power Supply	V_{dd}	4.75	5.0	5.25	V
Operating Ambient Temperature	Ta	0		+60	C

3.2 Power Requirements

Table 3-2. Power Requirements (Preliminary Estimate)

Mode of Operation	Typical Power at V_{dd}=5
Power Down	50 mW
Low Speed (SIR)	223 mW
High Speed (FIR)	430 mW

3.3 DC Specifications

All TTL I/O interface specifications are from 4.75 V to 5.25 V.

3.3.1 Driver DC Voltage Specifications (in Volts)

Table 3-3. Driver DC Voltage Specifications (in Volts)

Function	MAUL	MPUL	LPUL	MPDL	LPDL	MADL
TTL	5.50	3.80	2.40	0.50	0.00	-0.50

3.3.2 Driver DC Currents at Rated Voltages

Table 3-4. Driver DC Currents at Rated Voltages

Driver Type	V_{high} (V)	I_{high} (mA)	V_{low} (V)	I_{low} (mA)
4-mA TTL Driver Outputs	2.40	-4.00	0.50	4.00
6-mA TTL Driver Outputs	2.40	-6.00	0.50	6.00
24-mA TTL Driver Outputs	2.40	-24.00	0.50	24.00

3.3.3 Receiver DC Voltage Specifications (in Volts)

Table 3-5. Receiver DC Voltage Specifications (in Volts)

Function	MAUL	MPUL	LPUL	MPDL	LPDL	MADL
TTL	5.50	5.50	2.00	0.80	0.00	-0.50

3.3.4 Receiver DC Current Specifications

Table 3-6. Receiver DC Current Specifications

Function	Iil (μa)	Iih (μa)
All receivers, no pull-up	>-1 at V_{in}=LPDL	<1 at V_{in}=MPUL
All receivers with pull-up	250 at V_{in}=LPDL	<1 at V_{in}=MPUL

Definition of terms:

MAUL (Maximum Allowable Up Level)
The maximum voltage that may be applied for extended periods without affecting the specified reliability. Circuit functionality is not implied.

MPUL (Most Positive Up Level)
The most positive voltage that maintains circuit functionality. The maximum positive logic level.

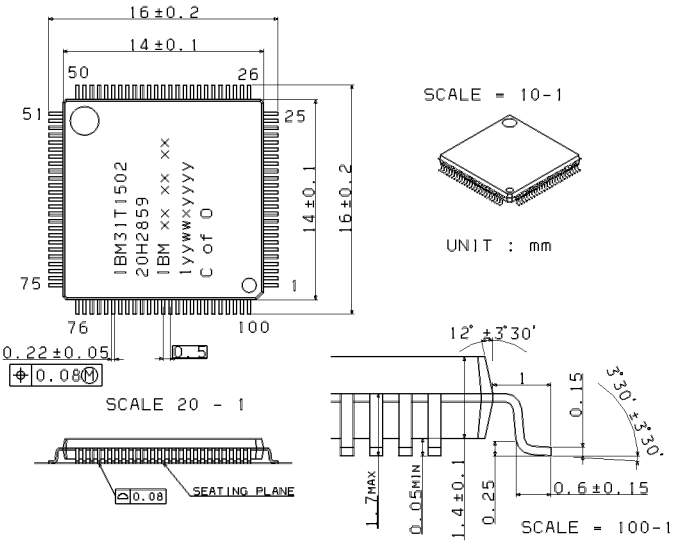
LPUL (Least Positive Up Level)
The least positive voltage that maintains circuit functionality. The minimum positive logic level.

MPDL (Most Positive Down Level)
The most positive voltage that maintains circuit functionality. The maximum negative logic level.

LPDL (Least Positive Down Level)
The least positive voltage that maintains circuit functionality. The minimum negative logic level.

MADL (Minimum Allowable Down Level)
The minimum voltage that may be applied for extended periods without affecting the specified reliability. Circuit functionality is not implied.

Appendix G. Packaging Information



G.1 IBM31T1502 Footprint