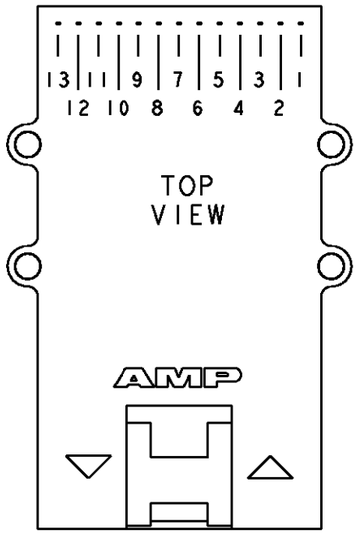
LOC	DIST
DR	1

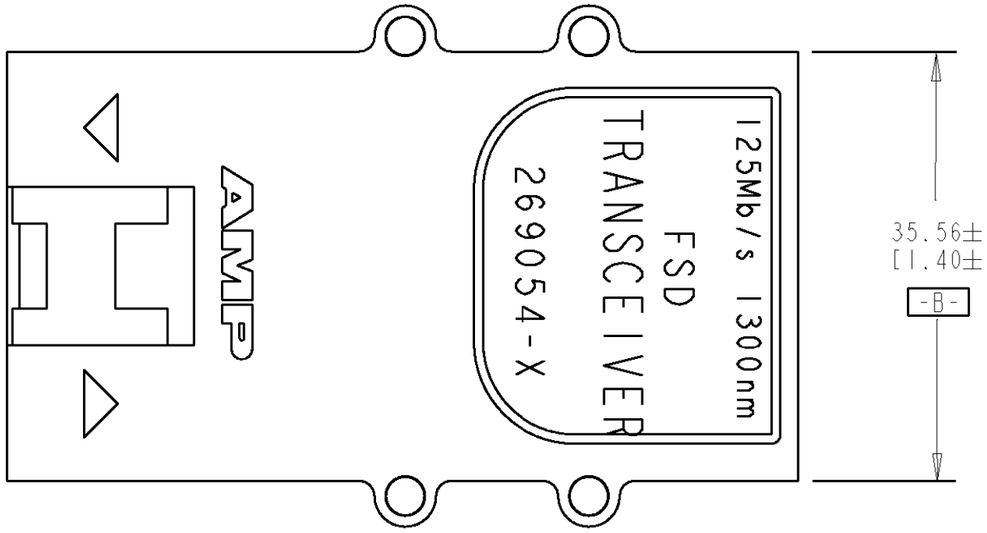
REVISIONS

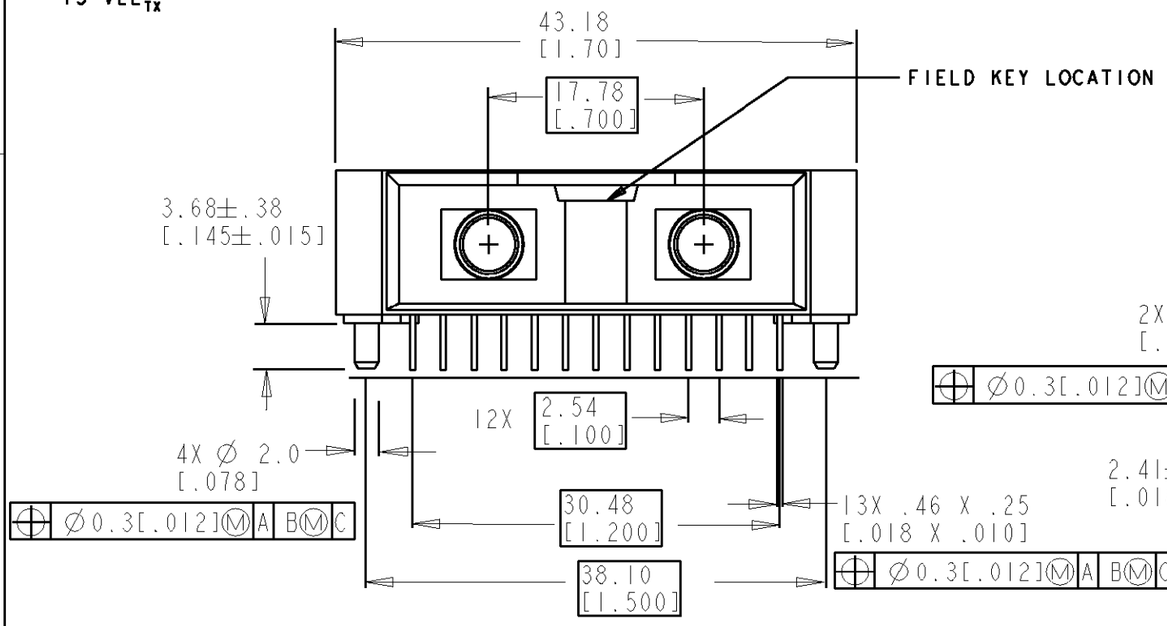
P	LTR	DESCRIPTION	DATE	DWN	APVD
	A	EC-0A20-0322-99	04JAN00	TJ	JH

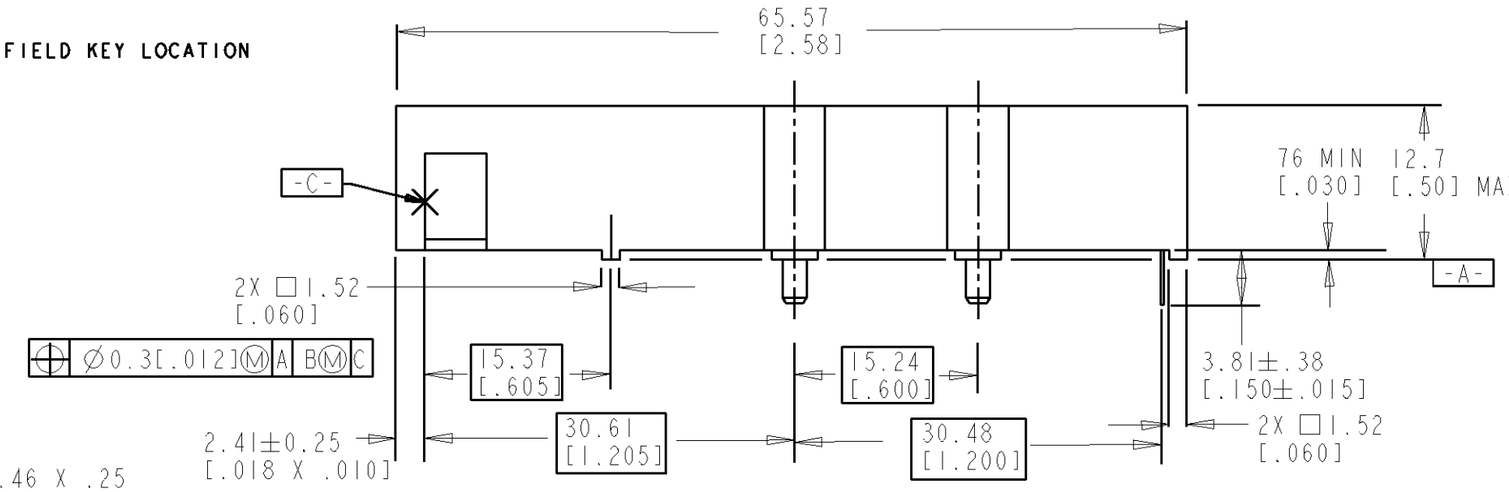
PIN ASSIGNMENTS

1 VEE_{Rx}
2 $\overline{Rx\ DATA\ OUT}$
3 Rx DATA OUT
4 SIGNAL DETECT
5 $\overline{SIGNAL\ DETECT}$
6 VCC_{Rx}
7 NO CONNECTION
8 NO CONNECTION
9 VCC_{Tx}
10 Tx DATA IN
11 $\overline{Tx\ DATA\ IN}$
12 V_{BB}
13 VEE_{Tx}









PART No	DESCRIPTION
269054-5	FIELD KEY
269054-4	OBSOLETE
269054-3	OBSOLETE
269054-2	OBSOLETE
269054-1	OBSOLETE

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DIMENSIONS: mm[INCHES]

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±-
1 PLC ±0.1
2 PLC ±0.01
3 PLC ±0.001
4 PLC ±0.0001
ANGLES ±-

MATERIAL -
FINISH -

DWN T. JAMES 3JAN00
CHK A. GOLDBERG -
APVD - -
PRODUCT SPEC 108-55003
APPLICATION SPEC -
WEIGHT -

AMP Incorporated
Harrisburg, PA 17105-3608

NAME
TRANSCEIVER MODULE
STANDARD 13 PIN, MOLDED OPTICS
1300nm, 125 Mb/s, FIELD KEYABLE

SIZE	CAGE CODE	DRAWING NO
A3	00779	C-269055

CUSTOMER DRAWING

SCALE	SHEET	REV
NTS	1 OF 3	A

LOC	DIST
DR	1

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-

PERFORMANCE SPECIFICATIONS 125 Mb/s RECEIVER(T A = 0-70~C, V CC - V EE = 4.75-5.25V DC)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
DATA RATE (NRZ)	B	-	10	-	125	Mb/s
OPTICAL INPUT (AVG) SENSITIVITY (1)	P_{IN}	.275NA 62.5/125µm FIBER B=125Mb/s,BER ≤ $2.5X10^{-10}$	-33.5	-	-14.0	dBm
OPTICAL WAVELENGTH	λ_{IN}	-	1270	-	1380	nm
DUTY CYCLE	-	-	25	50	75	%
OUTPUT RISETIME	t_{TLH}	20-80%, 50Ω TO V_{CC}-2V	.5	-	2.5	ns
OUTPUT FALLTIME	t_{THL}	80-20%, 50Ω TO V_{CC}-2V	.5	-	2.5	ns
PULSE WIDTH DISTORTION	-	50Ω TO V_{CC}-2V	-	-	0.4	ns
DATA DEPENDENT JITTER (3)	t_{DDJ}	50Ω TO V_{CC}-2V	-	-	0.8	ns
OUTPUT VOLTAGE LEVELS	V_{OH}	50Ω TO V_{CC}-2V	V_{CC}-1.025	-	V_{CC} -.88	V
	V_{OL}		V_{CC}-1.81	-	V_{CC} -1.62	V
SIGNAL DETECT (OUTPUT)	V_A	$P_{IN} \geq P_A$, 50Ω TO V_{CC}-2V	V_{CC}-1.025	-	V_{CC} -.88	V
	V_D	$P_{IN} \geq P_A$, 50Ω TO V_{CC}-2V	V_{CC}-1.81	-	V_{CC} -1.62	V
P IN POWER LEVELS (AVG)						
DEASSERT (4)	P_D		-41.0 OR P_B	-	-32.5	dBm
ASSERT	P_A		-39.5	-	-31	dBm
HYSTERESIS			1.5	2.0	-	dB
SIGNAL DETECT DELAY TIME						
DEASSERT		-	-	-	350	µs
ASSERT		-	-	-	100	µs
POWER SUPPLY VOLTAGE	V_{CC} - V_{EE}	-	4.75	5.0	5.25	V
SUPPLY CURRENT (7)	I_{CC} OR I_{EE}	-	-	-	110	mA
OPERATING TEMPERATURE	T_A	-	0	-	70	°C
ABSOLUTE MAXIMUM RATINGS						
STORAGE TEMPERATURE	-	-	-40	-	100	°C
LEAD SOLDERING LIMITS	-	-	-	-	240/10	°C/s
POWER SUPPLY VOLTAGE	V_{CC} - V_{EE}	-	-.2	-	7.00	V

NOTES:

(1) 2^{15}-1 PRBS. CENTER OF EYE OPENING.

2. DIMENSIONS IN ( ) ARE IN INCHES.

(3) MEASURED USING FDDI TEST SIGNALING FORMAT ANSI X3.166-1990.

(4) P_B = POWER AT WHICH BER = .01.

5. PIN/LEAD PLATING: 150 MIN MICROINCHES 93/7 TIN/LEAD OVER 50 MIN MICROINCHES NICKEL.

(6) CONFORMS TO ANSI X3.166-1990.

(7) DOES NOT INCLUDE CURRENT DRAWN BY ECL OUTPUT LOADS.

8. UNIT PROVIDED WITH PROCESS PLUG TO PROTECT OPTICAL PORTS DURING SOLDERING AND CLEANING.

9. CASE MATERIAL: POLYETHERIMIDE
MOUNTING PIN MATERIAL: BRASS
LEAD MATERIAL: PHOSPHOR BRONZE

dBm
dB

DIMENSIONS: mm[INCHES]

TOLERANCES UNLESS OTHERWISE SPECIFIED:

0 PLC	±-
1 PLC	±0.1
2 PLC	±0.01
3 PLC	±0.001
4 PLC	±0.0001
ANGLES	±-

MATERIAL -
FINISH -

DWN	T. JAMES 3JAN00
CHK	A. GOLDBERG -
APVD	-
PRODUCT SPEC	-
APPLICATION SPEC	-
WEIGHT	-

CUSTOMER DRAWING

AMP Incorporated
Harrisburg, PA 17105-3608

NAME
TRANSCEIVER MODULE
STANDARD 13 PIN, MOLDED OPTICS
1300nm, 125 Mb/s, FIELD KEYABLE

SIZE	CAGE CODE	DRAWING NO
A3	00779	C-269055

SCALE	SHEET	REV
NTS	2 OF 3	A

LOC	DIST
DR	1

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-

PERFORMANCE SPECIFICATIONS 125 Mb/s TRANSMITTER (T_A = 0-70~C, V_{CC}-V_{EE} = 4.75-5.25V DC)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYPICAL	MAX	UNITS
DATA RATE (NRZ)	B	-	0	-	125	Mb/s
OPTICAL OUTPUT (AVG)	P_{IN}	.275NA 62.5/125µm FIBER B=125Mb/s 50% DUTY CYCLE	-19.0	-	-14.0	dBm
EXTINCTION RATIO	$[P_{OL}/P_{OH}] \times 100\%$	-	-	-	10	%
OPTICAL WAVELENGTH	λ_{OUT}	CENTER	1270	1330	1380	nm
SPECTRAL WIDTH (SEE FIG.1)	$\Delta\lambda$	FWHM	-	130	-	nm
DUTY CYCLE	-	-	0	-	100	%
OUTPUT RISETIME	t_{TLH}	10-90%	.6	1.5	3.5	ns
OUTPUT FALLTIME	t_{THL}	90-10%	.6	1.5	3.5	ns
PULSE WIDTH DISTORTION	t_{DCD}	(PEAK-PEAK)	-	-	0.60	ns
DATA DEPENDENT JITTER	t_{DDJ}	(PEAK-PEAK)	-	-	0.60	ns
RANDOM JITTER	t_{RAN}	(PEAK-PEAK)	-	-	0.60	ns
DATA INPUTS	V_{IL}	-	V_{CC}-1.81	-	V_{CC}-1.475	V
	V_{IH}	-	V_{CC}-1.165	-	V_{CC}-.88	V
	I_{IL}	-	-2	-	-	µA
	I_{IH}	-	-	-	400	µA
REFERENCE VOLTAGE (OUTPUT)	V_{BB}	-	V_{CC}-1.396	-	V_{CC}-1.24	V
POWER SUPPLY VOLTAGE	V_{CC} - V_{EE}	-	4.75	5.0	5.25	V
SUPPLY CURRENT	I_{CC} OR I_{EE}	-	-	-	160	mA
OPERATING TEMPERATURE	T_A	-	0	-	70	°C

ABSOLUTE MAXIMUM RATINGS

STORAGE TEMPERATURE	-	-	-40	-	100	°C
LEAD SOLDERING LIMITS	-	-	-	-	240/10	°C/s
SUPPLY VOLTAGE	V_{CC} - V_{EE}	-	-.2	-	7.00	V

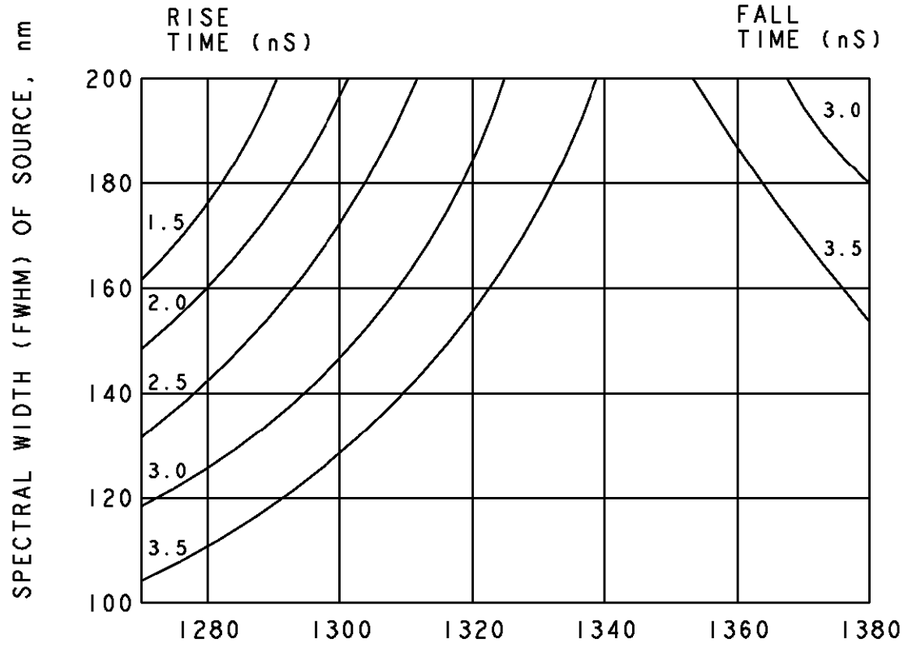

Figure 1

MAXIMUM ALLOWED SOURCE SPECTRAL WIDTH AS A FUNCTION OF SOURCE CENTER WAVELENGTH FOR VARIOUS SOURCE RISE AND FALL TIMES. THESE SPECIFICATIONS IN CONJUNCTION WITH THE FIBERS'S CHROMATIC DISPERSION AND MODAL BANDWIDTH PARAMETERS GIVEN IN CLAUSE 10, ANSI X3.166-1990. RESULT IN AN OPTICAL RISE TIME OF LESS THAN 5.0ns EXITING A 2km FIBER CABLE. CURVES ARE SHOWN FOR SOURCE RISE AND FALL TIME RANGING FROM 1.5ns TO 3.5ns.

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