

F 1. GENERAL

SCOPE

This specification covers the general requirements of the 3.5Ø earphone jack applied on audio systems and other related electronic apparatus. Especially this specification applied on the normal plastic for the through hole soldering process.

2. MECHANICAL

2-1. Terminal Strength

The terminals shall be capable of withstanding a force of 500 grams applied in any direction for 10 seconds without loosing or breakdown, except bending the terminals.

2-2. Insertion and Extraction Force

Insertion Force

Conditions	Value of Spec
Initial Condition	3.5 Kgs Max.
After life test After humidity test After heat test After cold test After resistance to soldering heat test	3.5 Kgs Max.

Extraction Force

Conditions	Value of Spec
Initial Condition	0.4 Kgs to 4.0 Kgs
After life test After humidity test After heat test After cold test After resistance to soldering heat test	0.3 Kgs to 4.0 Kgs

TOLERANCE		GENESIS TECHNOLOGY, INC a Genesis Electro-Mechanical Company	1015 GRANT STREET S.E. ATLANTA, GA 30315
LINEAR	ANGLES		
X. ±	X° ±	APPD:	MAT'L:
.X ±	.X° ±	CHKD:	FINISH:
.XX ±	.XX° ±	DRWN: AXL	Q'TY:
.XXX ±	.XXX° ±		

TITLE: AUDIO JACK W/DATE LINK			
PART NO.		AUPR-2008-AK11T <input type="checkbox"/>	
DWG NO.		SC-10054	
		UNITS	SCALE
		MM	NONE
		SHEET	REV
		2 OF 6	L

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REV	ECN NO.	NAME	DATE

F 3. ELECTRICAL

3.1. Withstand Voltage test

500 volts AC/RMS of commercial frequency 50 to 60 Hz applied between adjacent open terminals for 1 minute without breakdown.

3-2. Insulation Resistance


The insulation resistance between mutual insulated contacts should be complied with the following specification under 500 volts DC. (Method C unless otherwise specified).


Conditions	Value of Spec
Initial Condition	100 M ohms min.
After life test After heat test After cold test After resistance to soldering heat test	100 M ohms min.
After humidity test	50 M ohms min.
Note: The mated plug used to this measurement shall be allowed to clean and remove oxidation film on the surface before test.	

3-3. Contact Resistance

Contact resistance of jack shall not exceed the value defined in the table listed at a current less than 100 mA with frequency of 1 KHz by four terminals method.

Conditions	Value of Spec.	
	Plug to Contacts	Contact to Shunt
Initial Condition	50 m ohms max.	30 m ohms max.
After humidity test After heat test After cold test After resistance to soldering heat test	50 m ohms max.	30 m ohms max.
After durability test	100 m ohms max.	60 m ohms max.
Note: The mated plug used to this measurement shall be allowed to clean and remove oxidation film on the surface before test.		

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	MM	NONE	3 OF 6
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	SEE SHEET 6		
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F 4. ENDURANCE

Durability Test

The durability test shall consist of 5000 mating cycles of insertion and extraction with the mated plug or the gauge plug at a rate of 20 cycles (Typical) per minute, no load condition, with or without lubricant which should be specified the detail requirements. The performance of the jack before and after this test should comply with paragraphs 2-2 and 3-3 .

Measuring Condition

All measurements and test shall be made at a temperature 10°C to 35°C with relative humidity of 45% RH to 85% RH under standard atmospheric pressure unless otherwise specified conditions.

5. ENVIRONMENT

Humidity Test

The jack shall be placed in the testing chamber at the condition of 40°C ± 2°C and the relative humidity of 90% to 95% RH for 96 hrs, the dew drops on the surface of jack shall be blown off and removed from the surface of jack and then placed in ambient temperature for more than 30 minutes, recovery period. The relative test before and after this test should complied with paragraph 3-1 and 3-2.

Heat Test

The jack shall be placed in the testing chamber at a temperature of 85 ± 2°C and the relative humidity of less than 50% RH for 96 hrs. and then placed in ambient temperature for more than 30 minutes, recovery period. The relative test before and after this test should complied with paragraph 3-3.

Cold test

The jack shall be placed in the testing chamber at a temperature of -40°C ± 2°C for 96 hrs. and then placed in ambient temperature for more than 30 minutes, recovery period. The relative test before and after this test should complied with paragraph 3-3.

6. SOLDERING TEST

6-1 Solder Ability

The terminal of jack tested shall be dipped into soldering flux or equivalent for a period of 5 to 10 seconds and then immersed into molten solder, Sn, at a controlled temperature of 260°C ± 5°C for 3 ± 0.5 seconds after aging. The coverage should be more than 95% by the microscope of more than 10x.




6-2 Resistance To Soldering Heat

The terminals of the jack should be immersed into molten solder, Sn, at a controlled temperature of 260°C ± 5°C for 5 ± 1 second. The relative test after this test should complied with paragraph 3-3. The outlook of the jack should have no remarkable deterioration.

7. OPERATING TEMPERATURE

The range: -25 to +70 °C.

J 8. RoHS 6/6 Compliant.

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.XX ±	.XX° ±	DRWN: AXL	Q'TY:						
.XXX ±	.XXX° ±								
REV	SEE SHEET 6	ECN NO.	NAME	DATE					

J F OPTO Tx

1. GENERAL

1-1 Scope

The light transmitting unit is a standard-packaged product with connector and OPTO-electric component packaged with LED and drive IC. The function of unit changes the electric signal into light signal and be transmitted by plastic fiber.

This unit is operated at single +3V ~ + 5V and the input signal is TTL compatible. The module has a maximum operating speed of 13.2 Mbps for POF-752 series. The light signal is coupled into plastic fiber by connector. This unit has high performance at low dissipation current, steady light output and efficient light coupling

2. ELECTRICAL OF TRANSMITTING UNIT




2-1 Absolute Maximum Rating

Parameters	Symbol	Rating	Unit
Supply Voltage	V _{CC}	-0.5 ~ + 7.0	V
Input Voltage	V _{IN}	-0.5 ~ V _{CC} + 0.5	V
Operating Temperature	T _{opr}	-20 ~ + 70	°C
Storage Temperature	T _{stg}	-40 ~ + 70	°C
Electrostatic Damage	ESD	3.5	KV
Soldering Temperature	T _{SOL}	260	°C

Soldering Time ≤ 10 Seconds

2-2 Recommended Operating Condition

Parameters	Symbol	Min	TYP	Max	Unit
Supply Voltage	V _{CC}	2.75	3.00	3.25	V
		4.75	5.00	5.25	
High Level Input Voltage	V _{IH}	2.0			V
Low Level Input Voltage	V _{IL}			0.8	V

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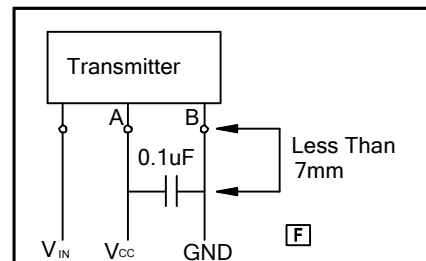
[F] [D]

2-3 ELECTRICAL CHARACTERISTICS (5.0V / TA=25°C)

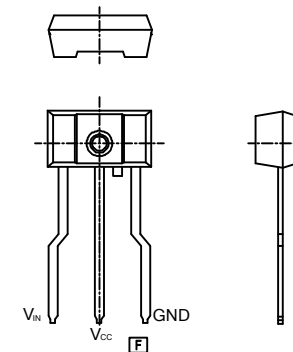
Parameters	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Operating Voltage	V _{CC}		2.75		5.5	V
Emission Wavelength	λ _P		640		670	nM
Transmitting Speed		NRZ signal			12.0	Mbps
Transmitting Distance		Using APF	0.2		20	M
Pulse Width Distortion	Δ _{tw}	6 Mbps NRZ signal	-25		25	ns
Fiber Light Coupling Output	P _f		-21	-17	-15	dBm
Dissipation Current	I _{CC}				10	mA
High Level Input Voltage	V _{IH}		2			V
Low Level Input Voltage	V _{IL}				0.8	V
Rise Time	t _r			30	40	ns
Fall Time	t _f			20	30	ns
Low ---> High Propagation Delay	t _{PLH}				100	Ns
High ----> Low Propagation Delay	t _{PHL}				100	ns
Jitter	Δt _J			1.5	25	

APPLICATION NOTE:

1.



2. To reduce the digital noise from digital IC on the mother-board, the planar capacitance formed by an isolated V_{CC} and GND plane is critical. The POF device must be mounted directly on those two planes to reduce the lead parasitic inductance.



[L]	UPDATE DRAWING AND CHANGE P/N	SUN	02/12/15'
[K]	MODIFIED DIMENSION 4.55 TO 4.66 AND REVISED HOUSING-OPTO GF CONTENT TO 30%	Demi	11/09/11'
[J]	MODIFIED MATERIAL, CORRECTED INDICATION, AND REVISED VDD TO VCC	Jeff	11/11/10'
[I]	INCREASED SHELL HOLE SIZE WAS 1.7, CORRECT BOM 9 AND 10 PLATING REMOVED TIN 120u"	AXL	7/28/10'
[H]	Specify Date Code Option	AXL	8/24/09'
[G]	ADD 26.0 DIMENSION	Kevin	8/21/09'
[F]	CHANGED DIMENSIONS SHEET 1 B-2 FROM 4-2.10 TO 4-2.05 B-4 FROM 14.2 TO 14.6 B-5 FROM 1.05± 0.2 TO 1.25 ± 0.30 ADDES NOTES and BOM	FOX	3/30/09'
[E]	SPECIFY COLOR	AXL	10/19/05'
[D]	CORRECT SCHEMATIC AND SPEC.	AXL	8/18/05'
[C]	ADD SHEET 2 AND 3	AXL	8/12/05'
[B]	CORRECT NUMBER WAS 5	AXL	8/12/05'
[A]	ISSUED	AXL	7/26/05'
REV	ECN NO.	NAME	DATE

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LINEAR	ANGLES
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.X ±	.X° ±
.XX ±	.XX° ±
.XXX ±	.XXX° ±

GENESIS TECHNOLOGY, INC.
a Genesis Electro-Mechanical Company

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ATLANTA, GA 30315

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MM	NONE	6 OF 6	L