PREPARED BY:	***Multiband Imaging Photometer for SIRTF***	NUMBER M22I30	
C. DAVIDSON		TYPE INSPECTION	
APPROVALS			
ENGINEERING	University of Arizona Steward Observatory, IR Group	DATE 04/02/98	
QUALITY	**SPECIFICATION**	SUPERSEDES SPEC. DATED	
PI/DEPUTY PI		REV. NEW	PAGE 1 of 5

TITLE

INCOMING INSPECTION OF160µ LEFT FLEX CABLE CLAMP (MIPSD-0260) PROCEDURE FOR

1.0 SCOPE

This specification defines the equipment, materials and procedures for incoming inspection of the160µ FPA Left Flex Cable Clamp, MIPSD – 0260, which will be used in the build of the MIPS 2 x 20 Ge: Ga focal plane array.

2.0 PURPOSE

The incoming inspection is to verify that the requirements of the purchase order have been satisfied and that the parts meet the specifications of drawing MIPSD-0260.

3.0 APPLICABLE DOCUMENTS

The following documents form a part of this inspection procedure to the extent specified herein. In the event of conflict between the requirements of this document and the requirements of the engineering drawings called out, the requirements of the drawings shall take precedence. Unless otherwise specified, the most recent revision of the documents identified herein shall apply.

University of Arizona, Steward Observatory, IR Group

M43P10	Configuration Management and Document Control

Drawings

MIPSD-0260	MIPS 160µ FPA Left Flex Cable Clamp

Manual

University of Arizona Safety Manual

4.0 REQUIREMENTS

4.1 Equipment

Acceptable results are contingent upon the use of the recommended equipment listed below or equivalent equipment. Equivalent equipment may be substituted for the recommended equipment if and only if effectiveness and accuracy are not decreased by its use.

Item	Quantity	Description
1	1 each	Microscope, stereozoom, Bausch and Lomb
2	1 each	Microscope, measuring, x, y, and z-axes, Nikon
3	1 each	Measurement system, Nikon Digimicro System
4	1 each	Gun, blow

4.2 Materials

Item	Quantity	Description
1	as received	Left Flex Cable Clamp, P/N MIPSD-0260
2	as required	Acetone, electronic grade
4	as required	Methanol, electronic grade
5	as required	Isopropanol, electronic grade
6	as required	Nitrogen, gaseous (dry) or air (dry)
7	as required	Wipes, cleanroom

5.0 PROCEDURAL REQUIREMENTS

Incoming inspection of the 160µ FPA Left Flex Cable Clamp is to be performed and tracked on a lot basis. The lot number to be recorded on the lot inspection summary sheet, document no. M22I30-A, (see figure 1) is to be the lot number which is designated by the vendor on the shipper accompanying the parts or on other vendor supplied documentation. If the vendor does not provide a lot number, then the U of A purchase order number followed by the date the parts were received will be used as the lot number.

Inspection, measurement data and other pertinent information is to be recorded on the inspection sheet, M22I30-A.

Hardware which fails to meet the acceptance requirements will be stored separately from those that do meet acceptance requirements.

6.0 PROCEDURE

Notes:

1. Handling, storage and disposal of chemicals are to be in accordance with the of University of Arizona Safety Manual.
2. Cleanroom gloves or finger cots are to be worn when handling hardware and equipment.
3. Removal of outer wrappings and packaging material is to be done outside of the cleanroom.

6.1 Verify Receipt of Requested Paperwork and Quantity

6.1.1 Inspect the outer packaging for signs of damage incurred during transport. Record the results on the appropriate inspection sheet, document no. M22I30-A.

6.1.2 Carefully remove outer packaging and remove contents and paperwork. With a cleanroom wipe dampened with isopropanol, wipe the inner packaging or the outside of the container. If the container(s) is not within plastic bags or other packing material, wipe down the containers, taking care not to obscure label information. Place the paperwork in cleanroom bags. Transport the parts and paperwork to the cleanroom.

6.1.3 Verify that the quantity on the shipper and/or other paperwork is in agreement with the quantity received. Report any deficiencies or overages in quantity to the lead engineer for resolution. Verify receipt of all paperwork called out on the purchase order.

6.2 Inspect for Contamination and Defects.

6.2.1 Place a representative part onto a clean microscope stage. Under microscope magnification, verify to first order that the part is to drawing MIPSD-0260.

6.2.2 Inspect the part for gross contamination. Using dry N_2 or air from a blow gun, blow particles from the surfaces of the part. If gross contamination is present, clean the surface by flushing it for a minimum of 20 seconds each with acetone, methanol then isopropanol. Blow the surface dry with dry N_2 or air.

Note:
To prevent redistribution of contaminants or possible solvent residue from remaining on the part, keep the surface wet with solvents until it is blown dry.

6.2.3 Under microscope magnification, verify that the surface is free of gross contamination. Inspect for damage, surface defects, corrosion and discoloration.

If contamination is still present or the part exhibits unacceptable surface conditions, reject and label and store appropriately.

6.3 Verify Dimensions

6.3.1 Using a 3-axes measuring microscope, make the measurements called out in the inspection sheet. Each parameter is to be measured at three different locations, and a minimum of three measurements is to be made at each location. For part acceptance, the average of the measurements for a parameter must fall within the specification range identified on the drawing and on the inspection sheet.

6.4. Lot Acceptance Verification.

Visually examine and measure each part per paragraphs 6.2.1 through 6.3.1.

6.6 Storage

Place acceptable hardware in a clean storage container. Cover the container and apply a green label, specifying: 'MIPS160μ FPA Left Flex Cable Clamp, P/N MIPSD-0260, Lot No. xxxx, Serial Number yyy, Acceptable.' For lot number identification, reference paragraph 5.0. Store container on appropriate shelf of N_2-purged desiccator.

In a similar manner label and store reject parts. On a red label, record the word 'reject'.

6.7 Verify Inspection Documentation is Complete.

6.7.1 Summarize the results of inspection and measurement of the individual parts on the lot incoming inspection sheet, M22I30-A.

6.7.2 Advise the process lead engineer of the status of the lot. Place all vendor-supplied paperwork and the inspection sheets in the process files.

MIPS 160μ FPA Left Flex Cable Clamp (MIPSD-0260)
M22I30-A Incoming Inspection Record

Lot No: _____ Operator: _____ Date: _____

Vendor: _____ U A Purchase Order No: _____

1. Outer Packaging: No damage noted ☐ Comments:
   Damage noted ☐

2. Quantity Ordered: _____; Quantity Received: _____

3. Measurement

   Equipment Used: _____; Calibration Date: _____

	a	b	c	d	e	f	∅ g
(see MIPSD – 0260 for details)							
	_____	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____	_____
(avg.)	_____	_____	_____	_____	_____	_____	_____
(spec:	0.391	0.125	0.082	0.163	0.737	0.923	0.390)

4. Lot Inspection/ Measurement Summary:

Quantity Acceptable: _____

Quantity Rejected: _____

Primary cause for rejection:
- a. out of spec dimension ☐
- b. damage or contamination ☐
- c. other ☐