

Phone : +91-40-27146073  
Fax : +91 -40-27182714, 27182651  
E-mail : ybbose@ecil.co.in



34 F 06-002 R0

## Electronics Corporation of India Limited

A Government of India Enterprise

रेडिएशन डिटेक्टर एवं उपकरणिकरण प्रभाग (विपणन)

RADIATION DETECTORS & INSTRUMENTATION DIVISION-PURCHASE

ECIL Post, Hyderabad - 500 062.

Ph:

e-mail:

EXTRA COPY

ENQUIRY No. EC/RID/PUR/

2771/342771

DATE : 2014.04.24

DUE DATE : 2014.05.08

Contact: YVVS.B. BOSE

Dear Sir(s),

Kindly submit your quotation in a Sealed Envelope Superscribing Enquiry No. and Due Date for the supply of the following items as per terms and conditions overleaf to IN-CHARGE, PURCHASE- RID, ECIL, HYDERABAD-62. QUOTATIONS AGAINST EACH TENDER SHALL BE SENT IN SEPARATE ENVELOPE. QUOTATIONS RECEIVED AFTER THE DUE DATE AND TENDERS SENT IN OPEN/UNSUPERSCRIBED ENVELOPE WILL BE REJECTED. PLEASE SEND REGRET LETTER, IF YOU ARE NOT ABLE TO QUOTE TO CONTINUE TO KEEP YOUR NAME IN OUR MAILING LIST.

### IMPORTANT INSTRUCTIONS

Parties must give the following information otherwise offer may be rejected.

1. Unit Rate and Terms of price
2. Quantity discount if any
3. Rate of Excise Duty, Sales Tax if any
4. Firm Delivery schedule
5. Mode of despatch
6. Estimated Packing and Forwarding Charges
7. Validity of quotation
8. Terms of payment
9. Sales Tax Registration Number/  
VAT and Service Tax Regn. No
10. SSI/NSI Regn. No.

Sl.No.	Material Description and Specification	Estimated Requirement	
		Unit Code	Quantity
1	SINGLE CHANNEL PREAMPHIFIER FC FOR ICSEA PART NO: F010.	Nos.	5
2	SINGLE CHANNEL PREAMPLIFIER FC FOR CONTROL PLUG PART NO: F020	Nos.	9
3	SINGLE CHANNEL PREAMPLIFIER FOR HTBCC, 4CPS/NV PART NO: F070	Nos.	5
4	SINGLE CHANNEL FOR DND PART NO: F040	Nos.	32
5	QUAD CHANNEL PREAMPLIFIER FC PART NO: F030	Nos.	8
6	QUAD CHANNEL PREAMPLIFIER BCC	Nos.	8
<b>Special Notes.</b>			
1. PLEASE QUOTE YOUR BEST OFFER IMMEDIATELY. (INDIAN ORIGIN VENDORS SHALL SUBMIT QUOTES IN COVERS WITH PROPER SEALING COVERS RECEIVED WITHOUT PROPER SEALING WILL BE REJECTED).			
2. THE TENDER DUE DATE IS 08-05-2014. THE TENDER CLOSES ON THIS DAY AT 16.00 Hrs. THE TENDER WILL BE OPENED IMMEDIATELY AFTER TENDER CLOSING TIME. HENCE, PLEASE SUBMIT QUOTE ACCORDINGLY.			
3. THE TECHNICAL SPECIFICATIONS AND INSTRUCTIONS & COMMERCIAL CONDITIONS ARE ATTACHED. PLEASE GO THROUGH THEM THOROUGHLY			

**NOTE:** 1. CERTIFICATE OF COMPLIANCE/BATCH CERTIFICATE / COC/CMRI/ATX/WARRANTY TEST CERTIFICATE SHALL BE FURNISHED. PLEASE CONFIRM.

2. DATA SHEETS (CATALOGUES) SHALL BE SUPPLIED WITH THE QUOTATION.

3. IF THE MATERIAL IS COVERED UNDER DGS & D RATE CONTRACT. PLEASE QUOTE THE RATES ACCORDINGLY.

4. IF THE MATERIAL IS COVERED UNDER EXCISE, FURNISH EXCISE TARIFF NUMBER AND CLASSIFICATION.

Yours faithfully,

For Electronics Corporation of India Limited

**YVVS.B. BOSE**  
24.04.2014  
उप महा प्रबंधक / Dy. General Manager  
आर आई डी/क्रय/ई सी आई एल  
RID/PURCHASE/ECIL  
हैदराबाद/HYDERABAD-500 062.



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ENQUIRY No. EC/RID/PUR/  
2771/342771

DATE :

DUE DATE :

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रेडिएशन डिटेक्टर एवं उपकरणिकरण प्रभाग (विपणन)

RADIATION DETECTORS & INSTRUMENTATION DIVISION-PURCHASE

ECIL Post, Hyderabad - 500 062.

Dear Sir(s),

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### IMPORTANT INSTRUCTIONS

Parties must give the following information otherwise offer may be rejected.

1. Unit Rate and Terms of price
2. Quantity discount if any
3. Rate of Excise Duty, Sales Tax if any
4. Firm Delivery schedule
5. Mode of despatch
6. Estimated Packing and Forwarding Charges
7. Validity of quotation
8. Terms of payment
9. Sales Tax Registration Number/  
VAT and Service Tax Regn. No
10. SSI/NSI Regn. No.

Sl.No.	Material Description and Specification	Estimated Requirement	
		Unit Code	Quantity
	AND QUOTE. DEVIATIONS ON COMMERCIAL TERMS ARE NOT ALLOWED		

- NOTE:**
1. CERTIFICATE OF COMPLIANCE/BATCH CERTIFICATE/CCOE/CMRI/ATX/WARRANTY TEST CERTIFICATE SHALL BE FURNISHED. PLEASE CONFIRM.
  2. DATA SHEETS (CATALOGUES) SHALL BE SUPPLIED WITH THE QUOTATION.
  3. IF THE MATERIAL IS COVERED UNDER DGS & D RATE CONTRACT. PLEASE QUOTE THE RATES ACCORDINGLY.
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Yours faithfully,

For Electronics Corporation of India Limited

व. सी. वी. एस. बी. बोस  
उप महा प्रबन्धक  
आर आई डी/क्रय/ई सी आई एल  
RID/PURCHASE/ECIL  
हैदराबाद/HYDERABAD-500 062.

**INSTRUCTION AND COMMERCIAL CONDITIONS:**

**ENQUIRY: 342771**

*for Publishing  
in websites*

1. The quote is to be submitted on or before the due date mentioned.
2. The BID is of TWO PART BID Mechanism.

Viz: Technical Bid (Part-A) and Price Bid (Part-B)

TECHNICAL BID SHALL CONTAIN:

- a) Technical Data.
- b) Unpriced Bid
- c) Compliance to our commercial conditions.
- d) Compliance to our Technical Specifications.
- e) Details of similar orders executed during past 3 years.
- f) Copies of Balance sheet, P&L account and IT returns of past 3 years.

THE PRICE BID SHALL CONTAIN:

- a) PRICE
3. We require validity of 30 days from the date of opening of Price Bid.
  4. We require the Delivery of items within 12-14 weeks, including prototypes, of receipt of purchase order by you.
  5. Please confirm about delivery schedule in your offer. The Standard Liquidated Damages clause is applicable for Delay in Deliveries. The Clause Read as " In the Event of any delay in deliveries beyond agreed schedule, Liquidated Damages will Be recovered @ 1/2% per week subject to a maximum of 5% on undelivered portion".
  6. Please quote for free delivery at our stores.
  7. **EMD(Earnest Money Deposit):**  
EMD Rs.3,00,000/- is applicable. Please submit EMD in the form of DD or Bank Guarantee along with Your technical Bid. If EMD is not submitted, bid will not be accepted.
  8. **Security Deposit:**  
Security Deposit of 10% of order value and valid till execution for contract performance is required to submit immediately after receipt of order security deposit can be submitted in the form of DD or Bank Guarantee.
  9. **Payment Terms:**
    - a) 80% payment+taxes shall be paid within 60 days of receipt of material at ECIL.
    - b) 10% payment shall be paid within 30 days of acceptance of material at ECIL.
    - c) 10% payment shall be paid after completion of warranty period and within 30 days of receipt of supplementary invoice. Alternatively, this payment can be made against submission of BG for equal amount and valid till warranty period.Payment for prototypes will not be made separately. Payment will be processed only after bulk Quantity supplied.
  10. We require warranty of 24 months from the date of supply. Please explain modus operandi for warranty support. The replacements for defective items shall be done within two weeks of intimation from ECIL.
  11. The standard risk purchase clause is applicable to this requirement. The clause read as "In the event of failure to comply with the purchase order terms & conditions, ECIL has right to cancel the order and proceed with an alternate source. In such case, you shall have to bear the extra cost incurred by us which will be recovered from your available credit". Please convey your acceptance in your quote.

*For Purchase*  
**श्री बी. बी. बोस**  
**B. B. BOSE**

उप महा प्रबंधक/Dy. General Manager  
आर आई डी/क्रय/ई सी आई एल  
RID/PURCHASE/ECIL  
हैदराबाद/HYDERABAD-500 062.



12. ARBITRATION:

- (b) Any dispute arising out of contract/purchase order or interpretation of any clause or terms & Conditions here of shall be settled through conciliation by both the purchaser and the supplier under the specific provisions of arbitration & conciliation act 1996.
  - (b) In case the conciliation fails, the parties are at liberty to pursue other available lawful options.
  - (c) Only courts in Ranga Reddy District, Andhra Pradesh have exclusive jurisdiction over this order/contract, notwithstanding the claim for concurrent jurisdiction of other courts.
13. Certificate of compliance in triplicate shall be submitted along with dispatches stating that the material supplied are in accordance with the specifications relevant to this order.
14. Documentation including maintenance & operating manual shall be supplied along with Material. (1 no. for each instrument, both in Hard copy as well as soft copy). Please explain in this regard.
15. Material will be inspected at your works prior to dispatch.
16. Please comment on each of above clauses and on technical specification enclosed, in your Offer without fail.

*Y.V.V.S.B. BOSE*  
24-04-2014  
Y.V.V.S.B. BOSE  
उप महा प्रबंधक/Dy General Manager  
आर आई सी/क्रय/ई सी आई एल  
RID/PURCHASE/ECIL  
हैदराबाद/HYDERABAD-500 062.

TECHNICAL SPEC OF SINGLE CHANNEL PREAMPLIFIER

ANNEXURE - I

5

Specifications of Pre-Amplifier

1. 1 Micro Ampere Pulse
2. Band Width – 35 MHz
3. Pulse Width – 50 n sec
4. Rise time & fall time should be less than 20 nano sec.
5. Input Reflected Noise – less than 0.1 Micro Ampere ( RMS)
6. Out Put Differential Pulse
7. To be operated with remote Disc Bias of 4 to 20 milli amperes
8. Built in HV – 0 to 1000 Volts , 1 milli Amperes
9. Built in LV - Input : 48 VDC , Output : +/- 15 Volts , 500 milli Amperes
10. Separate LV is required for amplifier and HV respectively
11. Above amplifier enclosure should be as per GA/BM enclosed.
12. PCB size should be fixed as 150 mm x 54 mm

Notes:

1. All components should meet PFBR/NPCIL component policy. (PP-E-2061 R.1)
2. Supplier is requested to demonstrate one Prototype within 2 weeks after receiving the Purchase order. This Prototype should be designed to maintain common PCB layout for all items 1 through 4 in the indent.
3. The Prototype should be qualifying EMI /EMC, CLIMATIC and SEISMIC as per PFBR Specification.  
For EMI /EMC: PFBR/60000/SP/1014, Rev. 0  
For SEISMIC: PFBR/21030/DN/1001, Rev. A  
For CLIMATIC: PFBR/60000/SP/1013, Rev. 3
4. Supplier should coordinate with M/S ECIL during qualification tests. ECIL will provide the Test facility.
5. After Prototype evaluation, we will specify all individual item requirements along with production clearance.
6. The Amplifier should be in-line with the Prototype Single Channel Amplifier.
7. All documents should be submitted for approval in ECIL formats before starting production. Documents to be submitted are GA, BM, PCB layout schematic, PCB GA/BM, QAP & ATP. Formats will be given by ECIL.
8. Source inspection is required.
9. Design know-how is to be given along with the consignment.
10. Delivery period should be within 10 – 12 weeks.
11. All test reports shall be given along with consignment.

C. Venkatesh  
22/2/2014

Y. V. V. V.

Ajit Garg  
(ANKIT LARG)

ITEM NO.	DESCRIPTION	IDENTITY	QTY.	MATL. SPEC./ DRG. NO./ MAKE&TYPE	REMARKS
1	SINGLE CHANNEL PREAMPLIFIER ASSLY.				4
2	LV MODULE FOR SINGLE CH. PRE-AMP	B1, B3	2		
3	AMPLIFIER MODULE FOR SINGLE CH. PRE-AMP	B4	1		
4	HV MODULE FOR SINGLE CH. PRE-AMP	B2	1		
5	HUBER SUHNER TRIAX RECEPTACLE	J6, J7	2	HUBER SUHNER OR EQVT P. NO.: 24-BNT-50-2-1/103NE	
6	HUBER SUHNER TRIAX PLUG	P6, P7	2	HUBER SUHNER OR EQVT P. NO.: 11-BNT-50-3-1/103NE	
7	19 PIN MS RECEPTACLE	J1	1	AMPHENOL OR EQVT P. NO.: MS 3102R-22-14P	
8	19 SOCKET MS PLUG	P1	1	AMPHENOL OR EQVT P. NO.: MS 3106F-22-14S	
9	3 PIN MS RECEPTACLE	J2	1	AMPHENOL OR EQVT P. NO.: MS 3102R-10SL-3P	
10	3 SOCKET MS PLUG	J3	1	AMPHENOL OR EQVT P. NO.: MS 3106F-10SL-3S	
11	DPDT TOGGLE SWITCH	SW1	1	KNITTER OR EQVT P. NO.: MTA206N	
12	ISOLATED BNC RECEPTACLE	J3	1	AMPHENOL OR EQVT P. NO.:31-010	
13	WHITE COLOUR TIP JACK	TJ1, TJ2, TJ3	3	CONCORD OR EQVT P. NO.: 1128-11-0319	
14	BLACK COLOUR TIP JACK	TJ4		CONCORD OR EQVT P. NO.: 1128-11-0310	
15	PANEL MOUNTING TRIMPOT 10KΩ, 1/2W	TR1	1	BOURNS OR EQVT P. NO.: 3059J-1-103M	
16	TWINAX RECEPTACLE	J4	1	HUBER SUHNER OR EQVT P. NO.: 23-BN0-0-0-2/133NE	
17	TWINAX PLUG	P4	1	HUBER SUHNER OR EQVT P. NO.: 11-BN0-0-0-1/133NE	
18	15 PIN HIGH DENSITY D-SUB CONNECTOR WITH SOLDER CUPS	B4.CON1, B2.CON2	2	HARTING OR EQVT P. NO.: 09561005604	
19	HUBER SUHNER TRIAX PLUG *B1.CON1, B1.CON2, B1.CON3, B2.CON1, B3.CON1, B3.CON2, B3.CON3	*	7	HUBER SUHNER OR EQVT P. NO.: 11-BNT-50-2-1/103NE	
20	M3 x 12 SLOTTED PAN HD SCREW		8	STL.NI.PLTD.	
21	M3 X 10 SLOTTED CSK HD. SCREW		16	STL. NI. PLTD.	
22	TRIAx THREADED RECEPTACLE	J5	1	AMPHENOL OR EQVT P. NO.: 34475	
23	TRIAx THREADED PLUG	P5	1	AMPHENOL OR EQVT P. NO.: 53175	
SINGLE CHANNEL PREAMPLIFIER BM					

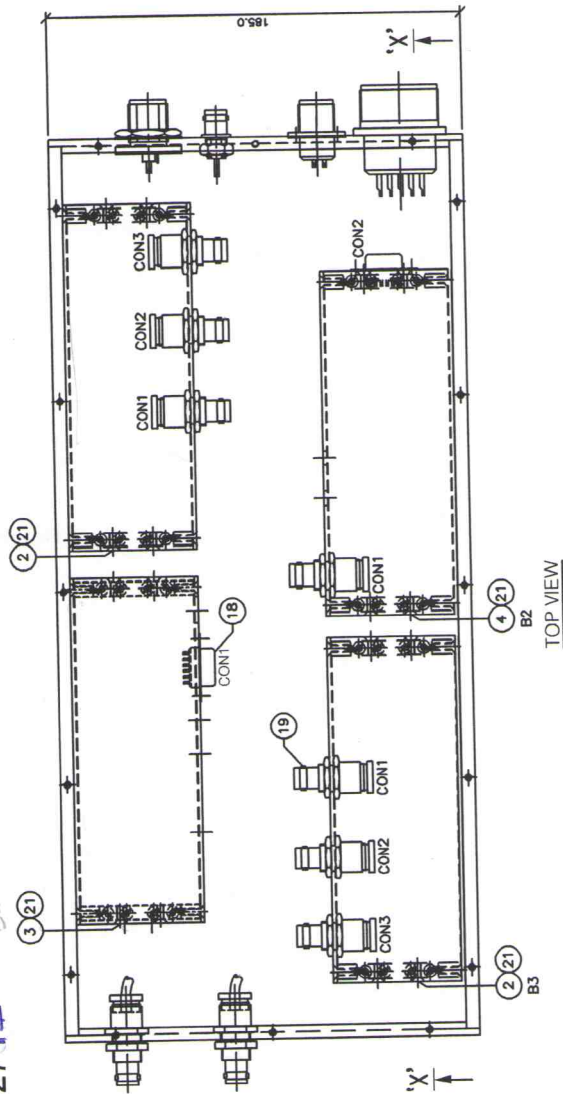
INDENT No: 34-86-342771

Y. W. W. W.  
22/2/2014

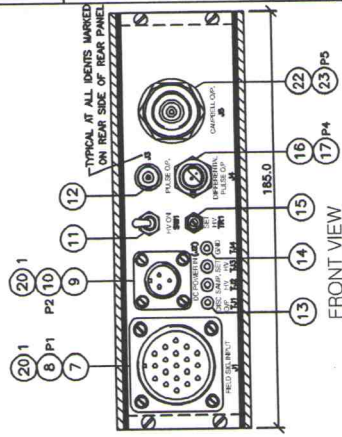
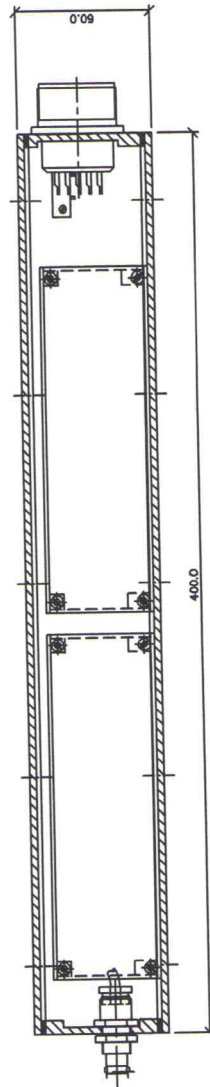
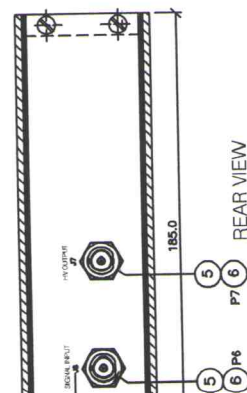


# SINGLE CHANNEL PREAMPLIFIER GA INDENT NO. 34-86-342711

B14



REAR SIDE OF FRONT PANEL  
TYPICAL AT ALL IDENT'S MARKED ON REAR SIDE OF FRONT PANEL



FRONT VIEW

C. Venkatesh  
22/2/2014

V. Venkatesh  
22/2/2014

3

## TECHNICAL SPEC OF QUAD PREAMPLIFIER ANNEXURE-2

### Specifications of Quad Pre-Amplifier

This Quad Amplifier is similar to single channel amplifier but inside four individual processing sections are required instead of one. 3 individual LV modules & 1 HV module are required.

1. 1 Micro Ampere Pulse
2. Band Width – 35 MHz
3. Pulse Width – 50 n sec
4. Rise time & fall time should be less than 20 nano sec
5. Input Reflected Noise – less than 0.1 Micro Ampere ( RMS)
6. Out Put Differential Pulse
7. To be operated with remote Disc Bias of 4 to 20 milli amperes
8. Built in HV – 0 to 1000 Volts , 1 milli Amperes
9. Built in LV - Input : 48 VDC , Output : +/- 15 Volts – 2 Modules
10. Built in LV - Input : 48 VDC , Output : +/- 5 Volts – 1 Modules
11. Separate LV is required for amplifier and HV.
12. Above amplifier enclosure should be as per GA/BM enclosed.
13. PCB size should be fixed as 150 mm x 54 mm

### Notes:

1. The above amplifier should be designed and developed by supplier. Delivery period should be within 12 – 14 weeks.
2. Source inspection is required.
3. One no. of amplifier shall be made & it should be qualifying EMI /EMC, CLIMATIC and SEISMIC as per PFBR Specification. Production clearance will be given after completion of all the tests on one unit.

For EMI /EMC: PFBR/60000/SP/1014, Rev. 0

For SEISMIC: PFBR/21030/DN/1001, Rev. A

For CLIMATIC: PFBR/60000/SP/1013, Rev. 3

4. Supplier should coordinate with M/s ECIL during qualification tests. ECIL will provide the Test facility.
5. All documents should be submitted for approval in ECIL formats within 2 weeks after receipt of purchase order. Documents to be submitted are GA, BM, PCB layout schematic, PCB GA/BM, QAP & ATP. Formats will be given by ECIL.
6. Design know-how is to be given along with the consignment.
7. All test reports shall be given along with consignment.

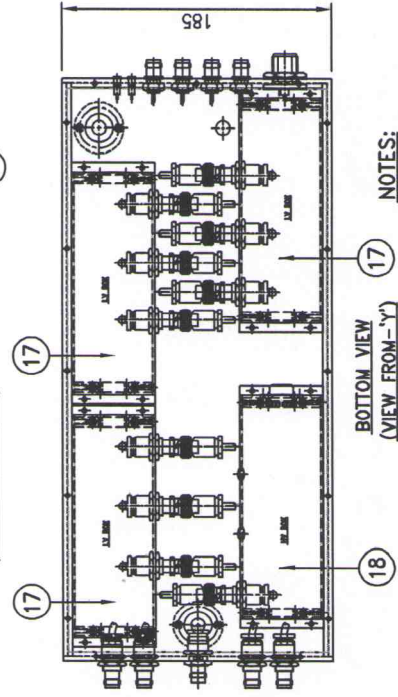
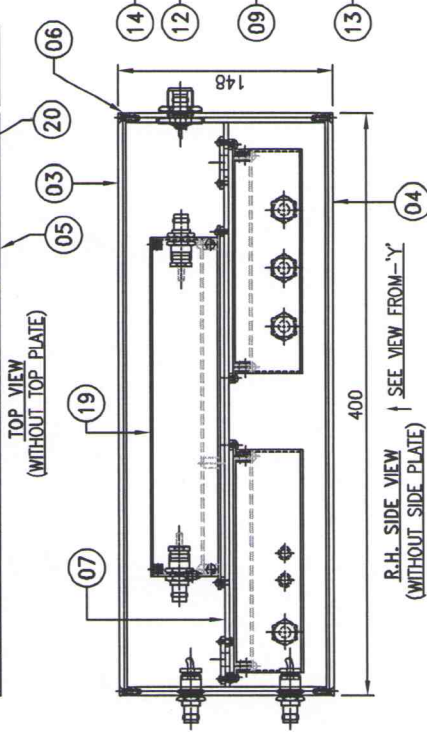
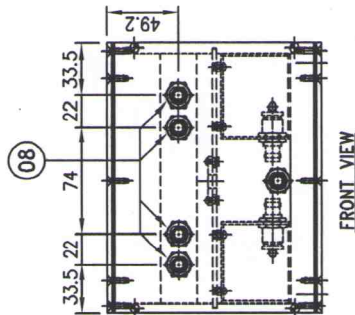
8. Warranty period → 2 yrs.

Y. M. A. A.  
11/3/14



QUAD CHANNEL PREAMPLIFIER GA/BM  
INDENT NO. 34-86-342771

21	CABLE GROMET	—	1
20	CABLE GRIPPER (TYPE-II)	—	RUBBER 1
19	QUAD PULSE-AMP. BOX (TYPE-II)	—	TEFLON 2
18	H.V. BOX	—	ALUMINIUM 1
17	L.V. BOX	—	ALUMINIUM 1
16	TWIN-X H&S CONNECTOR	H&S/24_BNO-0-4-1/133_N	ALUMINIUM 3
15	TRIAX CONNECTOR	AMPHENOL/34475	— 1
14	CO-AXIAL BNC CONNECTOR	AMPHENOL/EQVT	— 1
13	10 PIN 10SL MS CONNECTOR	ALLIED/MS3102R-18-1P	— 4
12	TIP JACK	CONCORD/EQVT	— 1
11	TRIM POT	BOURNS/EQVT	— 5
10	ON/OFF SWITCH, 2P, 2WAY	ALCO/EQVT	— 1
9	19 PIN 14S MS CONNECTOR	ALLIED/MS3102R 22-14P	— 1



NOTES:  
1. ALL DIMENSIONS ARE IN mm.

8	STRAIGHT BULK HEAD CABLE FEED THRU. CONNECTOR	HUBRE+SHUNER HS-24-BNT-50-2/103-N	—	5
7	PARTITION PLATE	—	ALUMINIUM	1
6	GASKET	—	NEOPRENE	2
5	SIDE PLATE	—	ALUMINIUM	2
4	BOTTOM COVER PLATE	—	ALUMINIUM	1
3	TOP COVER PLATE	—	ALUMINIUM	1
2	REAR PLATE	—	ALUMINIUM	1
1	FRONT PLATE (TYPE-II)	—	ALUMINIUM	1
PART No.	DESCRIPTION	MFG./TYPE No.	MATERIAL	QTY.

BILL OF MATERIAL

Y. V. arao  
11/3/14

1