ANNEXURE QA REQUIREMENTS

For Indent Line Item 1 to 3:

| 1. | Quality Specifications | Devices shall be Qualified to MIL-PRF-38535 CLASS-V requirements. |
|----|------------------------|--|
| | | Processed to meet the requirements of MIL-PRF-38535 CLASS-V including QCI Testing with ISRO's approved semiconductor process. |
| 2. | Radiation | The devices shall be guaranteed to meet the following Radiation |
| | Qualification | requirement: |
| | Requirement | 1. The device shall meet minimum 100 K Rad for TID. |
| 3. | Information Required | Single Event Effect threshold of minimum 80 MeV/mg/cm² SMD data sheet. |
| 3. | Along with the Quote | SMD data sheet. Burn in and Life test circuit, including Test Duration, Test condition, Test Temperature, inputs, outputs, biases, Power dissipation etc. Generic Radiation test results for TID and SEE. Failure rate estimation If the components are offered from existing stock, then vendor shall share details regarding the test data, date code and rescreening plan of such devices. Depending on the date code, rescreening as per agreed plan shall be carried out before the delivery of the devices. The vendor(s) authorized by original part manufacturer to source and sell parts in INDIA shall only be considered. Latest copy of authorization letter and point by point compliance endorsed by the Original Part Manufacturer in case quote is not from OEM. |
| | | OR |
| | | If quote is from Authorized Representative of HI-REL Parts Procurement Agency (HRPPA), Copy of latest authorization letter and point by point compliance endorsed by the HRPPA. If supplier is HI-REL Parts Procurement Agency (HRPPA) OR Representative of HRPPA, in addition to all the quality requirement of this Indent compliance with the supporting documents/certificates for the following shall be provided along with the quote-: It is mandatory that the vendor should have more than 5 years of experience as HRPPA. Details regarding the same to be supplied. Details of EEE part types supplied to other customers with name of space programs supported and Space agencies / Satellite payload manufacturers. Supplied parts shall meet Manufacturer recommended storage & cleanliness condition. |

| | | Outline of the Vendor's operating procedure, for compliance to quality requirements of this document; including details of mechanism for traceability starting from Original Parts Manufacturer till delivery to SAC. Details of Quality documents that will be supplied along with deliverables. For off-the-shelf / inventory parts: Date-code of supplied parts Storage and inspection criteria to be supplied whenever applicable. Technical and Quality Procurement specifications. Acceptability of such off-the-shelf parts will be at decided by SAC based on date code and the relifing details. |
|----|-----------------------|---|
| 4. | Documents required | Certificate of Conformance from Manufacturer. |
| | along with the supply | 2. QML-V Data pack to be supplied in softcopy only. |
| _ | of Components | 1 Feel desire shall be used at the ECD and the state |
| 5. | Additional | 1. Each device shall be packed in ESD safe package. |
| | Requirements | 2. Devices shall be supplied preferably from a single lot date |
| | | code and preferably not older than 2 years. |
| | | 3. In any case, devices shall not be older than 5 years. |

6. Important Note:

Point by point compliance with supporting documents as described above in para 1 to 5 shall be submitted along with the technical quote.

Additionally, if supplier is HRPPA/authorized representative of HRPPA, all the details as per para 3(7) shall be submitted along with quote with the supporting technical documents/certificates.

Failing so, the offer is liable to be rejected.

ANNEXURE QA REQUIREMENTS

For Indent Line Item 4:

| 1. | Quality Specifications | Devices shall be Qualified to MIL-PRF-38535 CLASS-V |
|----|------------------------|--|
| | | requirements. |
| | | OR |
| | | Processed to meet the requirements of MIL-PRF-38535 |
| | | CLASS-V including QCI Testing with ISRO's approved |
| | | semiconductor process. |
| 2. | Information Required | 1. SMD data sheet. |
| | Along with the Quote | 2. Burn in and Life test circuit, including Test Duration, Test |
| | | condition, Test Temperature, inputs, outputs, biases, Power |
| | | dissipation etc. |
| | | 3. Generic Radiation test results for TID and SEE.4. Failure rate estimation |
| | | |
| | | 5A. If the components are offered from existing stock, then vendor |
| | | shall share details regarding the test data, date code and rescreening plan of such devices. |
| | | 5B. Depending on the date code, rescreening as per agreed plan |
| | | shall be carried out before the delivery of the devices. |
| | | 6. The vendor(s) authorized by original part manufacturer to source |
| | | and sell parts in INDIA shall only be considered. Latest copy |
| | | of authorization letter and point by point compliance endorsed |
| | | by the Original Part Manufacturer in case quote is not from |
| | | OEM. |
| | | OR |
| | | |
| | | If quote is from Authorized Representative of HI-REL Parts |
| | | <u>Procurement Agency (HRPPA)</u> , Copy of latest authorization letter and point by point compliance endorsed by the HRPPA. |
| | | 7. If supplier is HI-REL Parts Procurement Agency (HRPPA) OR |
| | | Representative of HRPPA, in addition to all the quality |
| | | requirement of this Indent compliance with the supporting |
| | | documents/certificates for the following shall be provided along |
| | | with the quote-: |
| | | • It is mandatory that the vendor should have more than 5 years |
| | | of experience as HRPPA. Details regarding the same to be |
| | | supplied. |
| | | • Details of EEE part types supplied to other customers with |
| | | name of space programs supported and Space agencies / |
| | | Satellite payload manufacturers. |
| | | Supplied parts shall meet Manufacturer recommended storage & |
| | | cleanliness condition. |
| | | • Outline of the Vendor's operating procedure, for compliance |
| | | to quality requirements of this document; including details of mechanism for traceability starting from Original Parts |
| | | mechanism for traceability starting from Original Parts |

| | | Manufacturer till delivery to SAC. Details of Quality documents that will be supplied along with deliverables. For off-the-shelf / inventory parts: Date-code of supplied parts Storage and inspection criteria to be supplied whenever applicable. Technical and Quality Procurement specifications. Acceptability of such off-the-shelf parts will be at decided by SAC based on date code and the relifing details. |
|----|--|--|
| 3. | Documents required along with the supply | Certificate of Conformance from Manufacturer. QML-V Data pack to be supplied in softcopy only. |
| | of Components | 2. QiviL-v Data pack to be supplied in softcopy only. |
| 4. | Additional | 1. Each device shall be packed in ESD safe package. |
| | Requirements | 2. Devices shall be supplied preferably from a single lot date |
| | | code and preferably not older than 2 years. |
| | | 3. In any case, devices shall not be older than 5 years. |

5. Important Note:

Point by point compliance with supporting documents as described above in para 1 to 4 shall be submitted along with the technical quote.

Additionally, if supplier is HRPPA/authorized representative of HRPPA, all the details as per para **2(7)** shall be submitted along with quote with the supporting technical documents/certificates.

Failing so, the offer is liable to be rejected.