

Rate Contract

Government of India
Directorate General of Supplies & Disposals
Jeevan Tara Building, 5 Sansad Marg
New Delhi-110001
Tel Number 23360610/23360537

Rate Contract no.RF SGFG/IT-4/RC-D2050000/1210/84/F0177/1267
Dated 09-DEC-09

To,

AGMATEL INDIA PVT LTD
E-366, 2nd Floor, Nirman Vihar, Vikas Marg, Delhi 110092
Mr. A.K.Aggarwal- 9810054742, E-mail:aka@agmatel.com
Mr.Vijay Malhotra- 9810054741
Ph:011-22462256 / 22456529 / 43064306
Fax:011-22019833

Sub: Rate Contract for supply of RF Signal Generators and Function Generators
Validity: From 01-JAN-10 To 31-DEC-10 .

Ref:(1) This Office Tender Enquiry No. RF SGFG/IT-4/RC-D2050000/1210/84
Opened on 08-OCT-09.
(2) Your Quotation No. AIPL/TMI/AFG-SSG-RC-4 And Dated
03-OCT-09.

Dear Sir,

You are hereby informed that your above referred tender read with subsequent letters mentioned above for the Stores specified in the Schedules annexed has been accepted. This rate contract will be governed by the terms and conditions brought in the Form no. DGS&D 1001 available from dgs&d sales counter on payment of Rs. 50/- .The Rate Contract and the schedules annexed here to shall be the sole repository of this Rate Contract/Transaction.

SCHEDULES ANNEXED

- 1.Schedule "A" Description of stores,prices,duties/taxes.
- 2.Schedule "B" special conditions of contract / Other information.
- 3.Schedule "C" Information to DDOs about parallel rate contracts.
- 4.Annexure - Technical Specification

Yours Faithfully,

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Assistant Director(S)/Section Officer/Dy.Director
For and on behalf of the purchaser named in the Form DGS&D 1001.

COPY TO:

- 1.The Chief Controller of Accounts,Department of commerce,New Delhi/
COA Mumbai/COA Kolkata,COA Chennai.
(Through authentication cell) This issues with the approval of competent authority.
- 2.Deputy Director General of Supplies & Disposals,Chennai -10 copies each
- 3.Deputy Director General of Supplies & Disposals,Kolkata -10 copies each
- 4.Deputy Director General of Supplies & Disposals,Mumbai -10 copies each
- 5.Deputy Director General (QA),Kolkata -10 copies each
- 6.Deputy Director General (QA),Chennai -10 copies each
- 7.Deputy Director General (QA),Mumbai -10 copies each
- 8.Deputy Director General (QA),DGS&D -10 copies each
- 9.Inspection Authority ADG(QA) DGS&D New Delhi - 110001.
- 10.Quality assurance Officer Director (QA) Delhi Directorate/ Mumbai,Chennai/Kolkata.
- 11.Concurrent Audit
- 12.MIS Cell
- 13.Ledger clerk
- 14.O.L.Section
- 15.All Direct Demanding Officers as per mailing list maintained by DGS&D.



Assistant Director (S) / Section Officer / Deputy Director
FOR DIRECTOR GENERAL OF SUPPLIES & DISPOSALS

SCHEDULE - A

1. Rate Contract No.: -RF SGFG/IT-4/RC-D2050000/1210/84/F0177/1267
Dated 09-DEC-09 For the Supply of RF Signal Generators and Function Generators

2. Advance Rate Contract No.: - Nil
Dated

3.(a) Name and Full Address of the Firm :-

AGMATEL INDIA PVT LTD
E-366, 2nd Floor, Nirman Vihar, Vikas Marg, Delhi 110092
Mr. A.K. Aggarwal- 9810054742, E-mail: aka@agmatel.com
Ph: 011-22462256 / 22456529 / 43064306
Fax: 011-22019833
DELHI - 110092

(b) Name and Full Address of Manufacturer :-

1. Tektronix Inc. P.O.Box- 500, Beaverton, OR 97077 U.S.A
for Programmable Function Generators.
2. Rohde & Schwarz GMBH & CO. Germany for RF Signal Generators

(c) Brand: R&S-SG, Tek- AFG

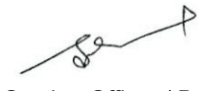
4. Validity of Rate Contract: 01-JAN-10 To 31-DEC-10

5. Description of Item, Specification, Unit, Rate

Item No.	Model No.	Store Description	Description	Unit	Rate (in Rs.)
2	R&S/SMF 100A+B12 2+B2+B20 +B26+K3 +K4+B83 +Adaptor+ RO3+K23	RF Signal Generators	Description: 10 MHz to 20 GHz	NOS.	2487922 Rs. TWENTY- FOUR LAKHS EIGHTY- SEVEN THOUSAND NINE HUNDRED TWENTY- TWO ONLY
5	Tektronix/ AFG3022 B	Programmable Function Generators	Description: 20 MHz two channel	NOS.	132862 Rs. ONE LAKHS THIRTY- TWO THOUSAND EIGHT HUNDRED SIXTY- TWO ONLY
7	Tektronix/ AFG3102	Programmable Function Generators	Description: 80 MHz two channel	NOS.	237255 Rs. TWO LAKHS THIRTY- SEVEN THOUSAND TWO HUNDRED FIFTY- FIVE ONLY

9	Tektronix/ Programmable Function AFG3252 Generators	Description: 200 MHz two channel	NOS.	419469 Rs. FOUR LAKHS NINETEEN THOUSAND FOUR HUNDRED SIXTY- NINE ONLY
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6-Terms of Delivery:	Free delivery at consignee's premises including installation / commissioning.
7-Excise Duty:	Not Applicable
8-Sales Tax:	CST / VAT Extra @4% or as applicable at the time of shipment
9-Delivery Period:	As per Schedule B
10-Annual Turnover/Monetary Limit:	Without Limit
11-Payment Terms:	As per Schedule B
12-Slab Discount Clause:	As per Schedule B
13-Prices:	FIXED
14-Quantity Offered:	Monetary Limit :Without Limit
15-Minimum Quantity in Single Supply Order:	Without Limit
16-Minimum order Value in Single Supply Order:	Without Limit
17-Status of the RC Holding Firm:	LSI
18-Paying Authority:	The Chief Controller of Accounts, Deptt. of Supply 16A, AKBAR ROAD, New Delhi -110011
19-Inspection Authority:	For Civil and Defence ADG(QA), Jeevan Tara Building, Parliament Street, New Delhi
20-Quality Assurance Officer:	For Civil and Defence Director(QA), Delhi Directorate, Jeevan Tara Building, 4th Floor, Sansad Marg DELHI -110001
21-Place where the Stores are to be Tendered for Inspection:	At firm's premises i.e. B-28, Patparganj Industrial Area, Delhi-92
22-R/C is DDOs Operated:	Yes
<p>With effect from First October two thousand eight (01-10-2008),all supply order(s) against this Rate Contract must be placed by Direct Demanding Officer(s) on-line through D.G.S&D web site (www.dgsnd.gov.in) (indentor's page) only. Supply order(s) in any other form placed on or after 01-10-2008 shall not be valid and shall not be acted upon by the contractor or any other concerned agencies.</p> <p>DDO shall download the supply order and send an ink signed copy to the concerned paying authority specified in the rate contract through Registered / speed post immediately after on-line placement of Supply Order(s).</p>	
23-Packing & Specification :	see annexure

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Asstt. Director (S) / Section Officer / Dy. Director
For and behalf of the purchaser named in the Form DGS&D 1001.

All the R/C particulars including prices in respect of individual R/Cs are available on DGS&D website which can be accessed by all. The DGS&D website is <http://dgsnd.gov.in>

SCHEDULE - B

RC Specification:A. Refer Annexure- A for detailed specification and make & models.

B. Country of Origin: China / USA for AFG and Germany for Signal Generator.

C. All DDOs / Indentors are advised to place their on line supply orders on R/C holding firm only, otherwise DGS&D shall not be responsible for any contractual complications including, quality & completeness of the materials ordered. A copy of on line supply order duly in signed & stamped may be forwarded to CCA, New Delhi and Supplier.

D. Delivery Period Clause:

i) FOR CUSTOM DUTY PAID ORDERS: 12-16 weeks from the date of receipt of confirmed order, receipt of Road Permit, End User Certificate & Octroi Exemption Certificate wherever applicable. In case single order is more than 50 nos. the first 50 Nos. shall be supplied as mentioned above i.e. within 12 - 16 weeks and subsequently further 25 Nos. shall be supplied every 45 days thereafter.

ii) FOR CUSTOM DUTY EXEMPTION ORDERS: 8 - 10 Weeks from the date of receipt of custom duty exemption certificate, In case single order is more than 50 Nos., the first 50 Nos. shall be supplied as mentioned above i.e. within 8 to 10 weeks & subsequently further 25 Nos. shall be supplied every 45 days thereafter.

Special Conditions of Contract:

1. Insurance: As per DGS&D standard transit insurance clause, it will be responsibility of supplier for safe arrival of stores in full and good conditions at user's point and purchaser will not pay separately for transit insurance clause.

2. WARRANTY: 3 Year on Arbitrary Function Generator and Signal Generators. 1 Year for Optional Accessories and Probes. Please note that the Calibration Certificate supplied along with main equipment is valid for 1 year

3. Payment terms : 98% payment would be payable against proof of inspection and consignee receipt certificate issued by consignee for having received the stores in full and in good conditions. The balance 2% after successful demonstration and acceptance of stores by consignee and on submission of Bank Guarantee for balance 2% value of order valid till 2 months beyond the warranty period of 3 years indemnifying the purchaser against all losses incurred by the purchase during the guarantee/warranty.

4 No assistance for import of finished product or raw material will be provided.

5. Octroi Duty and Local Taxes:

Normally materials to be supplied to Govt. Department against Govt. contracts are exempted from levy of town duty, Octroi duty, terminal tax and other levies of local bodies. The local Town/Municipal Body regulations at times, however, provide for such exemption only on production of such exemption certificate from any authorized officer. Contractors should ensure that stores ordered against contracts placed by this office are exempted from levy of town duty/Octroi duty, Terminal tax or other local taxes and duties. Wherever required, they should obtain the exemption certificate from the purchase officer or indentor concerned, to avoid payment of such local taxes or duties. Octroi, entry tax etc. on buyers account in absence of relevant exemption certificate.

6. Supply of Road Permits/ Way bill by the indentor/consignees: In all such cases where the requirement of Road Permit/Way Bills for entry of goods into a particular State is mandatory, the following provisions shall be strictly followed: -.

(a) The supplier shall request the indentor/consignee for providing Road permit/ Way bill within 10 days of the receipt of the Supply order. The supplier shall furnish all the necessary information and documents in this regard to Indentor/consignee.

(b) On receipt of the above request from the supplier, the indentor/consignee concerned shall arrange to provide the Road permit/Way Bill in the prescribed form to the supplier within a maximum period of two weeks so that the same reaches the supplier before the dispatch of the stores. However, in cases where the Road permit/Way Bill is issued on proof of actual invoice of the material, the consignee shall arrange to provide the Road permit/Way Bill from appropriate authorities within a maximum period of 5 days from the receipt of invoice.

(c) The supplier shall not be held responsible for any delay in supply due to non- supply/delayed supply of Road permit / Way bill by the indentor/consignee.

(d) All cases of abnormal delay in providing requisite details / documents by the supplier or issue of Road permit/Way bill by indentor/consignee, the same shall be reported to DGS&D.

7. Signing of Inspection Notes issued by QA Wing of DGS&D : Instructions to Indentors/Consignees.
Advance Payment Copy of Inspection Note for claiming 98% payment (copy No.1):

This is a provisional receipt. It only be tokens the receipt of stores by the consignee and is without prejudice to his rights of inspection and rejection under the general condition to contact. It is issued on said to contain basis the Contractor remaining responsible for proving the total quantities actually delivered. Consignee mentioned in the Inspection Notes should sign (in INK) & put his official rubber stamp on the Advance Payment Copy of Inspection Notes IMMEDIATELY on the receipt of the material and handover the same to the company's authorized representative. Where this is not possible or inconvenient, it should be signed (in INK) by an official authorized by the consignee in that behalf. In such cases, the official signing the receipt certificate should indicate his designation and the official on whose behalf he is signing; and put his official rubber stamp.

Balance payment & Accounts Copy of Inspection Note (Copy no 2 & 5) for claiming 2% balance payment.
Within 90 days from the date of material received, Consignee mentioned in the Inspection Notes should sign (in INK) & put his official rubber stamp on the Balance & Accounts office copy of Inspection Notes and should fill up the columns of Receipt Voucher No. In cases where the supply is incomplete or defective or the supplier do not carry out commissioning/demonstration of the stores within the period as per (i) above, the consignee shall report such cases immediately to the supplier and DGS&D.

In cases where the consignees do not release copy 2 and 5 of I/Notes within the period as (i) above for the reasons which are considered not valid by the supplier, they may approach DGS&D with complete details for authorization of balance payment without copy 2 and 5 of I/Notes and the same shall be considered by DGS&D on merits of each case..

8 End User Certificate: Please note that End User Certificate is required for Tek products. Delivery shall be subject to approval of end user certificate by Tektronix / US deptt of commerce.

9. Individual Validated License: Please note that organizations requiring individual validated licenses (IVL), as determined by US government, need to furnish license application. Please note that order acceptance & shipment will be performed only after receipt of IVL from US government.

10. Liquidated Damages: Levy of Liquidated Damages shall be exempted in cases where delay is due to late-receipt of CDE certificate, Road Permit or other such relevant documents (for effecting deliveries) from the customer or under force-demajeuere conditions.

11. CDE discount Clause :

(i) We shall offer the following discount against valid Custom Duty exemption Certificate on AFG and Signal Generators. (a) 17% for Defence customers (where present rate custom duty is nil as per custom notification 39/96) against valid CDE Certificate. Orders with multiple quantity will receive an additional discount of zero point four percent ratcheted at 50 units or (b) 10% for order customers like Education (where present rate of custom duty is 9.3% as per custom notification 51/96) against valid CDE Certificate

(ii) CDE Discount on AFG/SSG shall be applicable only on a single order value of Rs. 5 Lacs or more.

Annexure- A (Schedule-1for R&S Make Signal Generator)

Item No. 2. i.e. Signal Generator Basic Unit.
Requires Option SMF-B122 Frequency Range 1 GHz - 22 GHz
Model No.: SMF100A

2(a) Option: Frequency Range 1GHz to 22GHz (Factory Fitted)
Model No.: SMF-B122

2(b) Option: Frequency extension 100KHz to 1GHz (Factory fitted)
Model No.: SMF-B2



2(c) Option:AM/FM/Phase Modulation/LOG AM Modulator
Model No.: SMF-B20

2(d) Option: Step attenuator 100 kHz - 22 GHz (Factory fitted only)
Model No.: SMF-B26

2(e)Option: Narrow Pulse Modulation
Model No.: SMF-K3

2(f) Option: RF Analog Sweep
Model No.: SMF-K4

2(g) Option: Removable GPIB
Model No.: SMF-B83

2(h) Option for three year warranty (One year standard warrantee+ 2 year additional warranty)
Model No.: RO3

2(i) Test Port Adapter

2(j) Option: Pulse Generator
Model No.: SMF-K23

Total- for items no. 2, 2(a), 2(b), 2 (c), 2(d), 2 (e), 2(f), 2 (g), 2 (h), 2(i) 2(j)}

Total Price Rs. 24,87,922/-

Item No. 05.

Model No.: AFG3022B

Make: Tektronix

Model : Description: Arbitrary Function Generator 1µHz to 25MHz, 2 Channel, 5.6" Colour Display, AM/FM/PM/FSK/PWM, Sweep, Burst with USB, GPIB and LAN interface and with 3 year warranty

Total Price : Rs. 1,32,862/-

Item No. 07

Model No. : AFG3102

Make: Tektronix

Model Description: Arbitrary Function Generator 1µHz to 100MHz, 2 Channel, Color Display 5.6" Colour Display, AM/FM/PM/FSK/PWM, Sweep, Burst with USB, GPIB and LAN interface with 3 year warranty

Total Price : Rs. 2,37,255/-

Item No. 09

Model No. : AFG3252

Make: Tektronix

Model Description: Arbitrary Function Generator 1µHz to 240MHz, 2 Channel, Color Display 5.6" Colour Display, AM/FM/PM/FSK/PWM, Sweep, Burst with USB, GPIB and LAN interface with 3 year warranty

Total Price : Rs. 4,19,469/-



ANNEXURE

- 1: Type test reports consisting of functional tests and environmental tests for each item shall be from any government laboratory in India. The environmental tests are as follows:

Environmental Tests

These will be performed at the following conditions:

- (a) Dry Heat Test : 45 deg C at 16 hours as per IS:9000/Pt.3/sec.5/1977.
(reaffirmed in 2004)
- (b) Cold Test : 0 deg C for 4 hours as per IS:9000/Pt.2/sec.4/1977.
(reaffirmed in 2004)
- (c) Damp Heat Test: 95% RH at 45 deg C, two cycles of 24 hours each separated by a gap of 4 hours as per IS:9000/Pt.5/sec.1/1991.(reaffirmed in 2004)

All functional checks are to be carried out before and after one hour recovery period of above environmental tests sequence . There shall be no deterioration in the funtional parameters.

OEM Type Test reports with environmental testing to an equivalent International Standard shall also be acceptable in this case.

RF Signal Generators

A. R.F Signal Generator 9 kHz to 3 GHz

- 1. General purpose, wide frequency range, AM, FM or Phase M and Pulse modulation features
 - (a) Frequency Range : 9 kHz to 3 GHz
 - (b) Frequency Resolution : 0.1 Hz
- 2. Frequency Stability
 - (a) Ageing Rate for reference frequency : $< 2 \times 10^{-6}$ /year
 - (b) Temperature stability for reference frequency : $< 2 \times 10^{-6}$
- 3. Spectral Purity
 - (a) SSB Phase Noise at 1GHz,
on 20KHz offset and 1Hz Bandwidth : < -95 dBc
 - (b) Harmonics at 3 GHz at level 0 dBm : < -30 dBc
 - (c) Non Harmonics (>10 KHz carrier offset) : < -50 dBc
- 4. Reverse Power Protection : 2 W
- 5. Output Level
 - (a) Range : -120 dBm to +13 dBm
 - (b) Resolution : 0.1 dB
 - (c) Total Accuracy (for levels > -120 dBm)
at 25 Deg C : $< +/- 1$ dB
 - (d) VSWR : < 1.5 at 1 GHz and < 2 at
other frequencies
- 6. Modulation shall be AM, FM or Phase Modulation, IQ and Pulse Modulation
 - (a) Amplitude Modulation : Internal, external
 - (i) Modulation Frequency Range (3dB), $f > 100$ kHz: DC/ 20 Hz to 20 KHz
 - (ii) Modulation Depth : 0 to 100%
 - (iii) Resolution : 0.1%
 - (iv) AM Distortion at 1 kHz ($m < 80\%$), 0dBm : $< 5\%$ of reading +0.2%
 - (b) Frequency Modulation : Internal, external
 - (i) Frequency Deviation : 20 to 100 kHz
 - (ii) Resolution : 1%, min. 1 Hz
 - (iii) Modulation frequency range (-3dB) standard: DC/20 Hz to 80 KHz
 - (iv) Setting Error
(at AF=1KHz and 50%max deviation) : $< 5\%$ of reading + 300 Hz.
 - (c) Phase Modulation : Internal, External
 - (i) Phase Deviation : 0 to 5 rad.(min.)
 - (ii) Resolution : 1%

- (iii) Setting error(at AF =1KHz) : <5% of reading + 0.2 rad.
- (d) Pulse Modulation with built in Pulse Generator
 - (i) Rise/Fall Time : <3 micro sec
- (e) Internal Modulation Generator
 - (for AM/FM/Phase M) : 20 Hz to 80 KHz with resolution of 0.1 Hz
- 7. Memory : 10 Storage settings
- 8. Digital Sweep : RF, LF in Continuous sweep, Single sweep and single step
- 9. Interface : USB
- 10. Operating Temperature Range : 5 to 45 degree C
- 11. Power Requirement : 230 V +/-10% AC, 50 Hz +/- 3%

B. R.F Signal Generator 10 MHz to 20 GHz

- 1. General purpose, wide frequency range, AM, FM and Pulse modulation features
 - (a) Frequency Range : 10 MHz to 20 GHz
 - (b) Frequency Resolution : 0.1 Hz
- 2. Frequency Stability
 - (a) Ageing Rate for reference frequency : <1 x 10⁻⁶ /year
 - (b) Temperature stability for reference frequency : <1 x 10⁻⁶
- 3. Spectral Purity
 - (a) SSB Phase Noise at 10GHz, on 20KHz offset CW and 1Hz Bandwidth : <-100 dBc
 - (b) Harmonics at 20 GHz at level 0 dBm : < -30 dBc
 - (c) Non Harmonics (>50 KHz carrier offset) : < -55 dBc
- 4. Output Level
 - (a) Range : -105 dBm to + 5 dBm
 - (b) Resolution : 0.1 dB
 - (c) Accuracy (for levels>-100dBm) at 25 Deg C : < +/-1 dB at 10 GHz, 0 dBm
 - (d) Frequency response at 0 dBm : < 1 dB
 - (e) VSWR : < 2
- 5. Modulation shall be AM, FM and Pulse Modulation
 - (a) Amplitude Modulation : Internal, external
 - (i) Modulation Frequency Range(3dB), f >100kHz : DC/ 20 Hz to 20 KHz
 - (ii) Modulation Depth : 0 to 90%
 - (iii) AM Distortion at 1 kHz (m < 80%), 0 dBm : < 5% of reading + 0.2%
 - (b) Frequency Modulation : Internal, external
 - (i) Frequency Deviation : 20 to 100 kHz
 - (ii) Resolution : 1%, min. 1 Hz
 - (iii) Modulation frequency range (-3dB) standard: DC/20 Hz to 80 KHz
 - (iv) Setting Error (at AF=1KHz and 50%max deviation) : < 10%
 - (c) Pulse Modulation
 - (i) Rise/Fall Time : < 20 nano sec
 - (ii) On/off Ratio : >80 dB
 - (iii) Pulse Width : 100 ns min
 - (iv) Input Level : TTL
- 6. Memory : 10 Storage settings
- 7. Sweep
 - (a) RF Digital Sweep : Automatic single manual or externally triggered
 - (i) Sweep range and width (lin) : Freely selectable
 - (ii) Sweep Time : 30 ms to 1 s with resolution of 1 ms.
 - (b) RF Analog Sweep
 - (i) Sweep range : Freely selectable
 - (ii) Sweep Time : 30 ms to 90 s .
- 8. Interface : IEEE 488
- 9. Operating Temperature Range : 5 to 45 degree C
- 10. Power Requirement : 230 V +/-10% AC, 50 Hz +/- 3%

C. R.F Signal Generator 9 kHz to 2 GHz

1. General purpose, wide frequency range, AM, FM or Phase Modulation and Pulse modulation features
 - (a) Frequency Range : 9 kHz to 2 GHz
 - (b) Frequency Resolution : 0.1 Hz
2. Frequency Stability
 - (a) Ageing Rate for reference frequency : $<1 \times 10^{-6}$ /year
 - (b) Temperature stability for reference frequency : $<1 \times 10^{-6}$
3. Spectral Purity
 - (a) SSB Phase Noise at 1 GHz, on 20KHz offset and 1Hz Bandwidth : < -115 dBc
 - (b) Harmonics at 2 GHz at levels 0 dBm : < -30 dBc
 - (c) Non Harmonics (>10 KHz carrier offset) : < -60 dBc
4. Reverse Power Protection : 50 W
5. Output Level
 - (a) Range : -120 dBm to $+13$ dBm
 - (b) Resolution : 0.1 dB
 - (c) Total Accuracy (for levels >-120 dBm) at 25 Deg C : $< +/-0.8$ dB
 - (d) VSWR : <1.5 at 1 GHz and <2.0 at other frequencies
6. Simultaneous Modulations shall be combination of AM, FM or Phase Modulation and Pulse Modulation.
 - (a) Amplitude Modulation : Internal, external
 - (i) Modulation Frequency Range (3dB), $f > 100$ kHz : DC/ 10 Hz to 20 KHz
 - (ii) Modulation Depth : 0 to 100%
 - (iii) Resolution : 0.1%
 - (iv) AM Distortion at 1 kHz ($m = 30\%$) : $<1.5\%$
 - (b) Frequency Modulation : Internal, external
 - (i) Frequency Deviation : 0 Hz to 1 MHz at 2 GHz carrier
 - (ii) Resolution : 1%, min. 10 Hz
 - (iii) Modulation frequency range(-3dB) standard : DC/10 Hz to 20 KHz
 - (iv) Setting Error (at AF=1KHz and 50% max deviation) : $< 4\%$ of reading $+20$ Hz
 - (c) Phase Modulation : Internal, external
 - (i) Phase Deviation : 0 rad to 10 rad (min) at 2 GHz Carrier
 - (ii) Resolution : 1%
 - (iii) Setting error(at AF=1KHz) : $<4\%$ of reading $+0.02$ rad.
 - (d) Pulse Modulation
 - (i) Operating Mode : Internal, External
 - (ii) Pulse repeating frequency : 0 Hz to 2.5 MHz
 - (iii) On/off ratio : >80 dB
 - (e) Internal Modulation Generator
 - (i) Frequency : 0.1 Hz to 1 MHz with resolution of 0.1 Hz
7. Memory : 100 Storage settings
8. Digital Sweep : RF, AF in Automatic, Single shot, manual, Logarithmic modes .
9. Interface : IEEE-488 and RS 232
10. Operating Temperature Range : 5 to 45 degree C
11. Power Requirement : 230 V $+/-10\%$ AC, 50 Hz $+/- 3\%$

Programmable Function Generators

(1) Programmable Function Generator 20 MHz single channel

1. Frequency Bandwidth (Sine Wave) : 10 mHz to 20 MHz
2. No. of Channels : One
3. Standard Waveforms : Sine, square, pulse, ramp, noise, $\sin(x)/x$, exponential rise/fall, Gaussian, DC



4. Arbitrary Waveform Generator
 - (a) Band Width : 1mHz 6 MHz
 - (b) Sample Rate : 50 MS/s
 - (c) Record Length : 64K
 - (d) Waveform Memory : 4 Waveforms
5. Vertical Resolution : 12 Bit or better
6. Amplitude Range : 10mV to 10Vpp
7. Modulation : AM, FM, PM, FSK, Burst, PWM
8. Interface : USB, GPIB and LAN
9. Display : Monochrome
10. Operating Temperature Range : 5 to 45 degree C and 80% RH at 40 degree C
11. Power Requirement : 230 V +/- 10% AC, 50 Hz +/- 3%

(2) Programmable Function Generator 20 MHz Two channel

1. Frequency Bandwidth (Sine Wave) : 10 mHz to 20 MHz
2. No. of Channel : Two
3. Standard Waveforms : Sine, square, pulse, ramp, noise, sin(x)/x, exponential rise/fall, Gaussian, DC
4. Arbitrary Waveform Generator
 - (a) Band Width : 1 mHz to 6 Mhz
 - (b) Sample Rate : 50MS/s
 - (C) Sample Rate : 64K
 - (d) Waveform Memory : 4 Waveforms
5. Vertical Resolution : 12 Bit or better
6. Amplitude Range : 10mV to 10Vpp
7. Modulation : AM, FM, PM, FSK, Burst, PWM
8. Interface : USB, GPIB & LAN
9. Display : Colour
10. Operating Temperature Range : 5 to 45 debree C and 80% RH at 40 degree C
11. Power Requirement : 230 V +/- 10% AC, 50 Hz +/- 3%

(3) Programmable Function Generator 80 MHz One channel

1. Frequency Bandwidth (Sine Wave) : 10 mHz to 80 MHz
2. No. of Channel : One
3. Standard Waveforms : Sine, square, pulse, ramp, noise, sin(x)/x, exponential rise/fall, Gaussian, DC
4. Arbitrary Waveform Generator
 - (a) Bandwidth : 1 mHz to 25 MHz
 - (b) Sample Rate : 200 MS or 1GS/s
 - (c) Record Length : 128K /16K
 - (d) Waveform Memory : 4 Waveforms
5. Vertical Resolution : 12 Bit or better
6. Amplitude Range : 20 mV to 10 Vpp
7. Modulation : AM, FM, PM, FSK, Burst, Sweep
8. Interface : USB, GPIB and LAN
9. Display : Colour
10. Operating Temperature Range : 5 to 45 degree C and 80% RH at 40 degree C
11. Power Requirement : 230 V +/- 10% AC, 50 Hz +/- 3%

(4) Programmable Function Generator 80 MHz Two channel

1. Frequency Bandwidth (Sine Wave) : 10 mHz to 80 MHz
2. No. of Channel : Two
3. Standard Waveforms : Sine, square, pulse, ramp, noise, sin(x)/x, exponential rise/fall, Gaussian, DC
4. Arbitrary Waveform Generator
 - (a) Bandwidth : 1 mHz to 25 MHz
 - (b) Sample Rate : 200 MS or 1GS/s
 - (c) Record Length : 128K /16K
 - (d) Waveform Memory : 4 Waveforms



- 5. Vertical Resolution : 12 Bit or better
- 6. Amplitude Range : 20mV to 10Vpp
- 7. Modulation : AM, FM, PM, FSK, Burst, Sweep
- 8. Interface : USB, GPIB and LAN
- 9. Display : Colour
- 10. Operating Temperature Range : 5 to 45 degree C and 80% RH at 40 deg C
- 11. Power Requirement : 230 V +/- 10% AC, 50 Hz +/- 3%

(5) Programmable Function Generator 200 MHz One channel

- 1. Frequency Bandwidth (Sine Wave) : 10MHz to 200 MHz
- 2. No. of Channel : One
- 3. Standard Waveforms : Sine, square, pulse, ramp, noise, sin(x)/x, exponential rise/fall, Gaussian, DC
- 4. Arbitrary Waveform Generator
 - (a) Bandwidth : 1 MHz to 100 MHz
 - (b) Sample Rate : 50 MS or 2GS/s
 - (c) Record Length : 128K /16K
 - (d) Waveform Memory : 4 Waveforms
- 5. Vertical Resolution : 12 Bit or better
- 6. Amplitude Range : 50mV to 5Vpp
- 7. Modulation : AM, FM, PM, FSK, Burst, Sweep
- 8. Interface : USB, GPIB and LAN
- 9. Display : Colour
- 10. Operating Temperature Range : 5 to 45 degree C and 80% RH at 40 degree C
- 11. Power Requirement : 230 V +/- 10% AC, 50 Hz +/- 3%

(6) Programmable Function Generator 200 MHz Two channel

- 1. Frequency Bandwidth (Sine Wave) : 10MHz to 200 MHz
- 2. No. of Channel : Two
- 3. Standard Waveforms : Sine, square, pulse, ramp, noise, sin(x)/x, exponential rise/fall, Gaussian, DC
- 4. Arbitrary Waveform Generator
 - (a) Bandwidth : 1 MHz to 100 MHz
 - (b) Sample Rate : 250 MS or 2GS/s
 - (c) Record Length : 128K /16K
 - (d) Waveform Memory : 4 Waveforms
- 5. Vertical Resolution : 12 Bit or better
- 6. Amplitude Range : 50mV to 5Vpp
- 7. Modulation : AM, FM, PM, FSK, Burst, Sweep
- 8. Interface : USB, GPIB & LAN
- 9. Display : Colour
- 10. Operating Temperature Range : 5 to 45 degree C and 80% RH at 40 degree C
- 11. Power Requirement : 230 V +/- 10% AC, 50 Hz +/- 3%

(7) Programmable Function Generator 10 MHz single channel

- 1. Frequency Bandwidth (Sine Wave) : 10 MHz to 10 MHz
- 2. No. of Channels : One
- 3. Standard Waveforms : Sine, square, pulse, ramp, noise, sin(x)/x, exponential rise/fall, Gaussian, DC
- 4. Arbitrary Waveform Generator
 - (a) Band : 1mHz 5 MHz
 - (b) Sample Rate : 250 MS/s
 - (c) Record Length : 64K
 - (d) Waveform Memory : 4 Waveforms
- 5. Vertical Resolution : 12 Bit or better
- 6. Amplitude Range : 20mV to 20Vpp
- 7. Modulation : AM, FM, PM, FSK, Burst, PWM
- 8. Interface : USB, GPIB and LAN
- 9. Display : Monochrome
- 10. Operating Temperature Range : 5 to 45 degree C and 80% RH at 40 degree C
- 11. Power Requirement : 230 V +/- 10% AC, 50 Hz +/- 3%



Government of India
Directorate General of Supplies & Disposals
Jeevan Tara Building, 5 Sansad Marg
New Delhi-110001
Tel Number 23360610/23360537

Amendment No. RF SGFG/IT-4/RC-D2050000/1210/84/F0177/1267/28119
Dated: 08-FEB-10
Effective Date: 13-JAN-10

To
M/S AGMATEL INDIA PVT LTD
E-366, IInd Floor, Nirman Vihar, Delhi-92
DELHI-110092.

Sub : This office R/C No. RF SGFG/IT-4/RC-D2050000/1210/84/F0177/1267
Dated 09-DEC-09 for the Supply of RF Signal Generators and Function Generators.

Ref : Your Letter No. - Dated 20-JAN-10.

Dear Sir,

The following amendments to the schedule to subject rate contract in terms of rate are hereby authorised:-

UNDER SCHEDULE-A

Item: RF Signal Generators

Item Sr.No.	Item Description	Revised CST
2	Description: 10 MHz to 20 GHz	5% Exclusive

Item: Programmable Function Generators

Item Sr.No.	Item Description	Revised CST
5	Description: 20 MHz two channel	5% Exclusive

Item: Programmable Function Generators

Item Sr.No.	Item Description	Revised CST
7	Description: 80 MHz two channel	5% Exclusive

Item: Programmable Function Generators

Item Sr.No.	Item Description	Revised CST
9	Description: 200 MHz two channel	5% Exclusive

1. Against Clause 8 i.e. Sales Tax of Schedule A of the RC

FOR: The Existing Entries

READ: CST / VAT shall be paid extra @4% for all supplies made on or before 12.01.2010 and CST / VAT shall be paid extra @5% for all supplies made on or after 13.01.2010.

All other terms and conditions of the R/C Shall remain unaltered.

Please ack. receipt.

Yours faithfully,


(Section Officer/A.D./D.D.)

For & on behalf of Purchaser named in DGS&D-1001

Government of India
Directorate General of Supplies & Disposals
Jeevan Tara Building, 5 Sansad Marg
New Delhi-110001
Tel Number 23360610/23360537

Amendment No. RF SGFG/IT-4/RC-D2050000/1210/84/F0177/1267/28584

Dated: 22-FEB-10

Effective Date: 22-FEB-10

To
M/S AGMATEL INDIA PVT LTD
E-366, IInd Floor, Nirman Vihar, Delhi-92
Delhi
DELHI-110092.

Sub : This office R/C No. RF SGFG/IT-4/RC-D2050000/1210/84/F0177/1267
Dated 09-DEC-09 for the Supply of RF Signal Generators and Function Generators.

Ref : Your Letter No. AIPL/2009-10/AFG/68 Dated 06-FEB-10.

Dear Sir,

The following amendments to the schedule to subject rate contract in terms of rate are hereby authorised:-

UNDER SCHEDULE-A

Item:	Programmable Function Generators		Revised Rate
	Item Description		
4	Description: 20 MHz single channel	NOS.	Rs. 92504 Rs. NINETY-TWO THOUSAND FIVE HUNDRED FOUR ONLY
Item:	Programmable Function Generators		Revised Rate
	Item Description		
6	Description: 80 MHz single channel	NOS.	Rs. 186807 Rs. ONE LAKHS EIGHTY-SIX THOUSAND EIGHT HUNDRED SEVEN ONLY
Item:	Programmable Function Generators		Revised Rate
	Item Description		
8	Description: 200 MHz single channel	NOS.	Rs. 332657 Rs. THREE LAKHS THIRTY-TWO THOUSAND SIX HUNDRED FIFTY- SEVEN ONLY



1. Against Clause 5 of Schedule A of the RC

Under Column Model No.

Read model no. AFG3021B against item no. 04 of the RC

Specification: Arbitrary Function Generator 1uHz to 25 MHz, 1 Channel, Mono Display with USB, GPIB and LAN interface and with 3 year warranty.

Model : AFG3021B

Make: Tektronix

Total Price: 92,504.00

Read model no. AFG3101 against item no. 06 of the RC

Specification: Arbitrary Function Generator 1uHz to 100 MHz, 1 Channel, Color Display with USB, GPIB and LAN interface and with 3 year warranty.

Model No: AFG3101

Make: Tektronix

Total Price: 186807.00

Read model no. AFG3251 against item no. 08 of the RC

Specification: Arbitrary Function Generator 1uHz to 240 MHz, 1 Channel, Color Display with USB, GPIB and LAN interface and with 3 year warranty.

Model No: AFG3251

Make: Tektronix

Total Price: 332657.00

All other terms and conditions of the R/C Shall remain unaltered.

Please ack. receipt.

Yours faithfully,



(Section Officer/A.D./D.D.)

For & on behalf of Purchaser named in DGS&D-1001

With effect from First October Two thousand eight (01-10-2008), all Supply Order(s) against this Rate Contract must be placed by Direct Demanding Officer(s) on-line through D.G.S.&D. web site (www.dgsnd.gov.in) (indentor's page) only. Supply order(s) in any other form placed on or after 01-10-2008 shall not be valid and shall not be acted upon by the contractor or any other concerned agencies.

DDO shall download the Supply order and send an ink signed copy to the concerned paying authority specified in the Rate Contract through Registered / Speed post immediately after on-line placement of Supply Order(s).

Government of India
Directorate General of Supplies & Disposals
Jeevan Tara Building, 5 Sansad Marg
New Delhi-110001
Tel Number 23360610/23360537

Amendment No. RF SGFG/IT-4/RC-D2050000/1210/84/F0177/1267/29179
Dated: 09-MAR-10
Effective Date: 09-MAR-10

To
M/S AGMATEL INDIA PVT LTD
E-366, IInd Floor, Nirman Vihar, Delhi-92
Delhi
DELHI-110092.

Sub : This office R/C No. RF SGFG/IT-4/RC-D2050000/1210/84/F0177/1267
Dated 09-DEC-09 for the Supply of RF Signal Generators and Function Generators.

Ref : Your Letter No. - Dated 04-MAR-10.

Dear Sir,

The following amendments to the schedule to subject rate contract in terms of rate are hereby authorised:-

UNDER SCHEDULE-A

Item: RF Signal Generators
Item Description

1 Description: 9 kHz to 3 GHz

NOS.

Revised Rate

Rs. 425708
Rs. FOUR LAKHS
TWENTY-FIVE
THOUSAND SEVEN
HUNDRED EIGHT
ONLY

Item No. 01

Description of Stores: Signal Generator 9kHz - 3 GHz
Make / Model: R&S / SMC 100A

All other terms and conditions of the R/C Shall remain unaltered.
Please ack. receipt.

Yours faithfully,



(Section Officer/A.D./D.D.)

For & on behalf of Purchaser named in DGS&D-1001

With effect from First October Two thousand eight (01-10-2008), all Supply Order(s) against this Rate Contract must be placed by Direct Demanding Officer(s) on-line through D.G.S.&D. web site (www.dgsnd.gov.in) (indentor's page) only. Supply order(s) in any other form placed on or after 01-10-2008 shall not be valid and shall not be acted upon by the contractor or any other concerned agencies.

DDO shall download the Supply order and send an ink signed copy to the concerned paying authority specified in the Rate Contract through Registered / Speed post immediately after on-line placement of Supply Order(s).