

**अनिवार्य आवश्यकताएँ**

**संख्या : TEC42722002**

**Essential Requirements**

**ER No. : TEC42722002**

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**Base Station for Cellular Network**

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**भारत सरकार**

**खुर्शीद लाल भवन, जनपथ, नई दिल्ली - 110001, भारत**

**Telecommunication Engineering Centre**

**Government of India**

**Khurshid Lal Bhawan, Janpath, New Delhi-110001, INDIA**

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## Essential Requirements for:

### Base Station for Cellular Network

Certification Scheme: **GCS**

Product Fee Group: **C**

This ER covers all types of Base Stations for Cellular Network

*Note: Annexures referred to in this ER are Annexures as mentioned in "Annexures to ERs" No. TEC/SD/DD/TCP-222/02/June19 as updated from time to time and available on MTCTE portal.*

This product has the following variants:

1. BTS for GSM
2. BTS with AAS
3. BTS with MSR
4. eNodeB for LTE
5. NodeB for WCDMA

#### 1. Variant 1 : BTS for GSM

##### 1.101 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
1.1.1	Conducted And Radiated Emission - Class A	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
1.1.2	GSM BTS Operating Frequency	NFAP-Annex-F
1.1.3	GSM BTS Output Power	3GPP TS 45.005 Cl. 4.1.2. Annex-F1
1.1.4	GSM BTS Receiver Parameters	3GPP TS 51.021. Annex-F1
1.1.5	GSM BTS Transmitter Parameters	3GPP TS 51.021. Annex-F1
1.1.6	Immunity to AC Voltage Dips and Short	TEC EMI EMC Standard EN/IEC:61000-4-

	Interruptions	11. Annex-B
1.1.7	Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B
1.1.8	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
1.1.9	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4. Annex-B
1.1.10	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B
1.1.11	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
1.1.12	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B
1.1.13	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1

## 2. Variant 2 : BTS with AAS

### 2.101 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
2.1.1	BTS with AAS Operating Frequency	NFAP. Annex-F
2.1.2	BTS with AAS Receiver Parameters	3GPP TS37.145-1. Annex-F5
2.1.3	BTS with AAS Transmitter Parameters	3GPP TS37.145-1. Annex-F5
2.1.4	Conducted And Radiated Emission - Class A	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
2.1.5	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
2.1.6	Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B
2.1.7	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
2.1.8	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4. Annex-B
2.1.9	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B

2.1.10	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
2.1.11	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B
2.1.12	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1

### 3. Variant 3 : BTS with MSR

#### 3.101 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
3.1.1	BTS with MSR Operating Frequency	NFAP. Annex-F
3.1.2	BTS with MSR Receiver Parameters	3GPP TS37.141 Cl. 7.2. Annex-F4
3.1.3	BTS with MSR Transmitter Parameters	3GPP TS37.141 Cl. 6.6.1. Annex-F4
3.1.4	Conducted And Radiated Emission - Class A	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
3.1.5	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
3.1.6	Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B
3.1.7	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
3.1.8	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4. Annex-B
3.1.9	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B
3.1.10	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
3.1.11	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B
3.1.12	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1

### 4. Variant 4 : eNodeB for LTE

#### 4.101 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
4.1.1	Conducted And Radiated Emission - Class A	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
4.1.2	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
4.1.3	Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B
4.1.4	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
4.1.5	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4. Annex-B
4.1.6	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B
4.1.7	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
4.1.8	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B
4.1.9	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1
4.1.10	LTE eNodeB Home BS Parameters	3GPP TS36.141. Annex-F3
4.1.11	LTE eNodeB Operating Frequency	NFAP. Annex-F
4.1.12	LTE eNodeB Receiver Parameters	3GPP TS36.141. Annex-F3
4.1.13	LTE eNodeB Transmitter Parameters	3GPP TS36.141. Annex-F3

#### 5. Variant 5 : NodeB for WCDMA

##### 5.101 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
5.1.1	Conducted And Radiated Emission - Class A	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
5.1.2	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
5.1.3	Immunity to DC Voltage Dips and Short	EN/IEC:61000-4-29. Annex-B

	Interruptions	
5.1.4	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
5.1.5	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4. Annex-B
5.1.6	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B
5.1.7	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
5.1.8	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B
5.1.9	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1
5.1.10	WCDMA NodeB Operating Frequency	NFAP. Annex-F
5.1.11	WCDMA NodeB Receiver Parameters	3GPP TS25.141. Annex-F2
5.1.12	WCDMA NodeB Receiver Parameters Home BTS Adj Chl Op Power	3GPP TS25.141. Annex-F2
5.1.13	WCDMA NodeB Transmitter Parameters Home BTS Adj Chl Op Power	3GPP TS25.141. Annex-F2