

Calibration Charges: D6.03a, Microwave Metrology Section (w.e.f. 01.04.2025)													
Attenuation , Reflection coefficient ,E-field , and Shilding Effectivemess												EDC	
Sl. No.	Parameter	Item Type / Group	Item Name	Alias Name	Range	No. of Points for Calibration	Limitation / Condition	*Present Charges per Item Rs.	*Present Additional Charges Rs.	Description for Additional Charges	Remarks, if any	Normal	Tatkal
1	Attenuation	Attenuator	Coaxial Fixed Attenuator	Attenuatio Pad	0.1-60 dB at 30 MHz & 1-40 GHz	3 Frequencies	Connector Type-N/7mm (50 ohm)/2.4mm	26300	8800	For each additional frequency			
2	Attenuation	Attenuator	Waveguide Fixed Attenuator	Attenuation Pad	0.1-60 dB at 5.8-18 GHz	3 Frequencies	Waveguide flange	26300	8800	For each additional frequency			
3	Attenuation	Attenuator	Coaxial step Attenuator	Variable Attenuator	0.1-60 dB at 30 MHz & 1-40 GHz	1 Frequency	Connector Type-N/7mm (50 ohm)/2.4mm	108100	108100	For each additional frequency			
4	Attenuation	Attenuator	Rotary Vane Attenuator	Variable Attenuator	0.1-60 dB at 5.8-18 GHz	1 Frequency	Waveguide flange	83700	83700	For each additional frequency			
5	Attenuation	Attenuator	30 MHz WBCO Attenuator	Standard Piston Attenuator	0.05-60 dB at 30 MHz	1 Frequency	Connector Type-N/7mm (50 ohm)	91400					
6	Attenuation	Coupler	Coaxial Directional Coupler		0.1-60 dB at 30 MHz & 1-18 GHz	1 Frequency	Connector Type-N/7mm (50 ohm)	14400	14400	For each additional frequency			

7	Attenuation	Coupler	Waveguide Directional Coupler		0.1-60 dB at 5.8-18 GHz	3 Frequencies	Waveguide flange	43100	14400	For each additional frequency	
8	Attenuation	Coupler	Dual Directional Coupler		0.1-60 dB at 30 MHz & 1-18 GHz	1 Frequency	Connector Type-N/7mm (50 ohm)	26300	26300	For each additional frequency	
9	Attenuation	30MHz Receiver	Attenuator & Signal Calibrator	Receiver with built-in 30MHz Attenuator	0.1-60 dB at 30 MHz	1 Frequency	Connector Type-N/7mm (50 ohm)	108100			
10	Attenuation	Splitter	Power Splitter	Power Divider	0.1-60 dB at 30 MHz & 1-18 GHz	1 Frequency	Connector Type-N/7mm (50 ohm)	14400	14400	For each additional frequency	
11	Reflection Coefficient/ VSWR	Termination	Coaxial Mismatch	Coaxial Termination	1.02-5 at 2 -18 GHz	3 Frequencies	Connector Type-N/7mm (50 ohm)	26300	8800	For each additional frequency	
12	Reflection Coefficient/ VSWR	Sensor	RF Transfer Standard	Coaxial Thermister Mount	1.02-5 at 2 -18 GHz	3 Frequencies	Connector Type-N/7mm (50 ohm)	26300	8800	For each additional frequency	
13	Attenuation	1kHz Receiver	VSWR Meter	RF Ratiometer	0.1-30 dB at 1kHz	1 Frequency	Connector BNC (50 ohm)	46400			
14	Attenuation & VSWR	Bridge	SWR Bridge		0.1-60 dB at 1-18 GHz, 1.02-5 at 2 -18 GHz	1 Frequency	Connector Type-N/7mm (50 ohm)	26300	26300	For each additional frequency	

Minimum 3-4 weeks

Minimum 5 working days

15	Reflection Coefficient/ VSWR	Termination	Waveguide Standard Mismatch	Waveguide Match Load	0.01-0.2 at 5.8-18 GHz	3 Frequencies	Waveguide flange	46400	15300	For each additional frequency		from date of submission	9 days from date of submission
16	Reflection Coefficient	Reflection Standard	Coaxial Short/Open Circuit	Offset Short Circuit	0.96-0.99 at 2-18 GHz	3 Frequencies	Connector Type-N/7mm (50 ohm)	32300	11100	For each additional frequency			
17	Reflection Coefficient/ VSWR	Impedance Standard	Coxial Airline	Beadless Airline	0.01-0.05 at 2-18 GHz	1 Frequency	Connector Type-N/7mm (50 ohm)	11100	11100	For each additional frequency			
18	Phase	Phase Shifter	Rotary Vane Phase Shifter	Variable Phase Shifter	0-180 degree (X-Band)	1 Frequency	Waveguide flange	83700	83700	For each additional frequency			
19	E Field (V/m)/Radiated power density(mW/cm2)	Antenna	Probe	Microwave leakage detector	(19a) Probe	1 Freq. and 3 power levels		17200	17200	For each additional frequency			
					(19b) Probe	3 Freq. and 3 power levels		51400	17200	For each additional frequency			
					(19c) Probe as per TEC Norm	TEC/TP/EMF/001/01 .SEP-2009		125,000		For each additional frequency			
										For each additional frequency			
										For each additional frequency			
										For each additional frequency			

20	Shielding effectiveness	planar Material	MRI tester	RF transparency sheet		1 Freq. and 3 power		34000	34000	For each additional frequency	
21	Cal Kit calibration	Open, Short, Load	Calibration Kit	Cal Kit	21(a) from 1 MHz to 3 GHz	5 Frequency points	Connector Type-N/7mm (50 ohm)	34939	34939	For each additional frequency	
					21(b) 1 MHz to 8 GHz			43395	43395		
					21(c) 1 MHz to 18 GHz			51851	51851		
					21(d) 10 MHz to 50 GHz			67744	67744		
22	Cal Kit verification	Open, Short, Load	Calibration Kit	Cal Kit	22(a) from 1 MHz to 3 GHz	5 Frequency points	Connector Type-N/7mm (50 ohm)	50708	50708	For each additional frequency	
					22(b) 1 MHz to 8 GHz			58043	58043		
					22(c) 1 MHz to 18 GHz			67211	67211		
					22(d) 10 MHz to 50 GHz			84716	84716		