

Calibration Charges: D6.03a, Microwave Metrology Section (w.e.f. 01.04.2021)

Attenuation , Reflection coefficient ,E-field , and Shilding Effectiveness

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
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	
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	
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	TEC/TP/EMF/001/01.SEP-2009	1,25,000		For each additional frequency	
					(19b) Probe	3 Freq. and 3 power levels				For each additional frequency	
					(19c) Probe as per TEC Norm	For each additional frequency					
						For each additional frequency					
						For each additional frequency					
20	Shielding	Planar Material	MRI tester	RF		1 Freq. and 3 power		34000	34000	For each	

	effectiveness			transparency sheet		levels				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		