



CC-2634

CERTIFICATE OF CALIBRATION

Godrej | CALIBRATION SERVICES

Godrej & Boyce Mfg. Co. Ltd.,
Calibration Services, Plant 18 B, 1st Floor,
Pirojshanagar, Vikhroli,
Mumbai - 400079.
Dir.: +91-22-67965914-48

TRUE COPY

Form containing calibration details: FR-QT-21, Certificate No. M-230228-3-1, Date of Calibration 28-Feb-23 To 03-Mar-23, Customer Details (National Centre for Quality Calibration), Details of Under Calibration instrument (Multi-Product Calibrator), Details of Master Equipment table, Work Instruction No. WI-ET-18,20,21,22,23,25,26,27,28,36, Environmental Details, REMARK, and Authorized Signatory AK Kulkarni.

NCQC Valid up to 03/03/2024 Reviewed



Validity unknown
Digitally signed by D S M S GODREJ AND
BOYCE MFG CO LTD
Date: 2023.03.10 17:05:30
Reason: Calibration Certificate
Location: Mumbai

NCQC System Certificate No. 260



Godrej & Boyce Mfg. Co. Ltd.

Regd. Office: Pirojshanagar, L.B.S. Marg, Vikhroli, Mumbai - 400 079.T.:+91-22-67961700/1800 W:www.godrej.com

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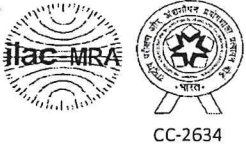
Godrej & Boyce Mfg. Co. Ltd.,
Calibration Services, Plant 18 B, 1st Floor,
Pirojshanagar, Vikhroli,
Mumbai - 400079.
Dir.: +91-22-67965914-48

FR-QT-21		Certificate No. M-220302-22-1		ULR Number : CC263422000009849F		
Range		UUC Reading	Standard Reading	Error	Measurement Uncertainty ±(%)	Coverage Factor @ C.L 95.45 (k)
DC voltage :	329.9999 mV	0.1000mV	0.09969	0.00031	0.1300	2
		1.0000mV	0.99929	0.00071	0.1300	2
		50.0000mV	49.99959	0.00041	0.0009	2
		100.0000mV	99.99922	0.00078	0.0009	2
		329.0000mV	328.9976	0.0024	0.0009	2
		-329.0000mV	-329.0019	0.0019	0.0009	2
	3.299999 V	0.330000V	0.3300000	0.0000000	0.0009	2
		1.000000V	1.0000008	-0.0000008	0.0009	2
		3.290000V	3.2900029	-0.0000029	0.0009	2
		-3.290000V	-3.2900028	0.0000028	0.0009	2
	32.99999 V	5.00000V	5.0000214	-0.0000214	0.0009	2
		10.00000V	10.0000149	-0.0000149	0.0009	2
		32.90000V	32.9000124	-0.0000124	0.0009	2
		-32.90000V	-32.9000242	0.000242	0.0009	2
	329.9999 V	50.0000V	50.000161	-0.000161	0.0009	2
		100.0000V	100.000254	-0.000254	0.0009	2
		329.9000V	329.89964	0.00036	0.0009	2
		-329.9000V	-329.89979	-0.00021	0.0009	2
	1020.000 V	500.000V	499.99959	0.00041	0.0009	2
		750.000V	749.99941	0.00059	0.0009	2
1000.000V		999.99916	0.00084	0.0009	2	
-1000.000V		-999.99915	-0.00085	0.0009	2	
AC voltage: 32.999 mV	1mV@10Hz	1.000mV	1.0076	-0.0076	0.7200	2
	1mV@50Hz	1.000mV	1.0025	-0.0025	0.7200	2
	6mV@20kHz	6.000mV	6.0015	-0.0015	0.7200	2
AC voltage: 329.999 mV	33mV@10Hz	33.000mV	32.9963	0.0037	0.0348	2
	33mV@50Hz	33.000mV	33.0001	-0.0001	0.0170	2
	33mV@500kHz	33.000mV	33.068	-0.068	0.1034	2
	329.9mV@10Hz	329.900mV	329.862	0.038	0.0250	2
	329.9mV@50Hz	329.900mV	329.878	0.022	0.0045	2
	329.9mV@500kHz	329.900mV	329.812	0.088	0.1300	2



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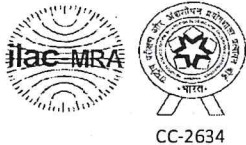


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FR-QT-21		ULR Number : CC26342200009849F				
Certificate No. M-220302-22-1						
Range	UUC Reading	Standard Reading	Error	Measurement Uncertainty ±(%)	Coverage Factor @ C.L 95.45 (k)	
AC voltage: 3.29999V	3.29V@10Hz	3.29000V	3.28949	0.00051	0.0232	2
	3.29V@50Hz	3.29000V	3.28915	0.00085	0.0030	2
	3.29V@500kHz	3.29000V	3.28986	0.00014	0.1300	2
AC voltage: 32.9999V	32.9V@10Hz	32.9000V	32.8961	0.0039	0.0232	2
	32.9V@50Hz	32.9000V	32.9001	-0.0001	0.0080	2
	32.9V@100kHz	32.9000V	32.8978	0.0022	0.0243	2
AC voltage: 329.999V	329.9V@45Hz	329.900V	329.927	-0.027	0.0050	2
	329.9V@50Hz	329.900V	329.926	-0.026	0.0050	2
	329.9V@20kKHz	329.900V	329.907	-0.007	0.0582	2
AC voltage : 1020V	1000V@50Hz	1000.00V	999.973	0.027	0.0047	2
	1000V@10kHz	1000.00V	1,000.086	-0.086	0.0100	2
DC Current: 329.999µA	1.000µA	1.000µA	1.00035	-0.00035	0.0600	2
	10.000µA	10.000µA	9.99992	0.00008	0.0060	2
	329.000µA	329.000µA	328.9886	0.0114	0.0060	2
	-329.000µA	-329.000µA	-328.9881	-0.0119	0.0060	2
DC Current: 3.29999mA	0.50000mA	0.50000mA	0.5000068	-0.0000068	0.0060	2
	1.00000mA	1.00000mA	1.0000121	-0.0000121	0.0060	2
	3.29000mA	3.29000mA	3.290051	-0.000051	0.0030	2
	-3.29000mA	-3.29000mA	-3.290052	0.000052	0.0030	2
DC Current: 32.9999mA	5.0000mA	5.0000mA	5.000051	-0.000051	0.0026	2
	10.0000mA	10.0000mA	10.000047	-0.000047	0.0025	2
	32.9000mA	32.9000mA	32.90039	-0.00039	0.0070	2
	-32.9000mA	-32.9000mA	-32.90025	0.00025	0.0070	2
DC Current: 329.999mA	50.000mA	50.000mA	50.00041	-0.00041	0.0061	2
	100.000mA	100.000mA	100.00038	-0.00038	0.0210	2
	329.900mA	329.900mA	329.9015	-0.0015	0.0579	2
	-329.900mA	-329.900mA	-329.9024	0.0024	0.0579	2
DC Current: 2.99999A	1.00000A	1.00000A	0.999902	0.000098	0.0485	2
	2.90000A	2.90000A	2.900016	-0.000016	0.0599	2
	-2.9000A	-2.90000A	-2.900056	0.000056	0.0599	2



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Range		UUC Reading	Standard Reading	Error	Measurement Uncertainty ±(%)	Coverage Factor @ C.L 95.45 (k)
DC Current: 20A	5.0000A	5.0000A	4.999919	0.000081	0.0533	2
	10.0000A	10.0000A	9.999815	0.000185	0.0486	2
	-10.0000A	-10.0000A	-9.999089	-0.000911	0.0486	2
	20.0000A	19.9900A	19.998499	-0.008499	0.0650	2
	-20.0000A	-19.9900A	-19.998661	0.008661	0.0650	2
AC Current: 329.99µA	30µA@10Hz	30.00µA	29.9938	0.0062	0.1064	2
	30µA@50Hz	30.00µA	29.9941	0.0059	0.1064	2
	30µA@1kHz	30.00µA	30.0033	-0.0033	0.1063	2
AC Current: 3.29999mA	0.33mA@10Hz	0.33000mA	0.329874	0.000126	0.0990	2
	0.33mA@50Hz	0.33000mA	0.329922	0.000078	0.0990	2
	0.33mA@1kHz	0.33000mA	0.329948	0.000052	0.0990	2
AC Current: 32.9999mA	3.30mA@10Hz	3.30000mA	3.29849	0.00151	0.0250	2
	3.30mA@50Hz	3.30000mA	3.29961	0.00039	0.0250	2
	3.30mA@10kHz	3.30000mA	3.29964	0.00036	0.0250	2
AC Current: 329.999mA	33mA@10Hz	33.000mA	32.9921	0.0079	0.0250	2
	33mA@50Hz	33.000mA	32.9994	0.0006	0.0250	2
	33mA@10kHz	33.000mA	32.9944	0.0056	0.0250	2
	329.9mA@10Hz	329.900mA	329.934	-0.034	0.0250	2
	329.9mA@50Hz	329.900mA	329.836	0.064	0.0250	2
	329.9mA@10kHz	329.900mA	329.836	0.064	0.0250	2
AC Current: 2.9999A	1.1A@10Hz	1.1000A	1.099562	0.000438	0.0250	2
	1.1A@50Hz	1.1000A	1.100036	-0.000036	0.0250	2
	1.1A@10kHz	1.1000A	1.103817	-0.003817	0.0250	2
AC Current: 10.9999A	3A@45Hz	3.0000A	2.99947	0.00053	0.0250	2
	3A@50Hz	3.0000A	2.99983	0.00017	0.0250	2
	3A@5kHz	3.0000A	2.99391	0.00609	0.0250	2
AC Current: 20.5A	11A@50Hz	11.0000A	10.99992	0.00008	0.0354	2
	11A@5kHz	11.0000A	10.99749	0.00251	0.0354	2
	20A@50Hz	20.0000A	19.99688	0.00312	0.0352	2
	20A@5kHz	20.0000A	19.99289	0.00711	0.0600	2



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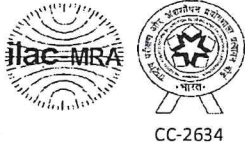
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FR-QT-21		Certificate No. M-220302-22-1		ULR Number : CC26342200009849F		
Range		UUC Reading	Standard Reading	Error	Measurement Uncertainty ±(%)	Coverage Factor @ C.L 95.45 (k)
Resistance : 2 Wire Mode	10.9999Ω	0.100Ω	0.1000168	-0.0000168	0.0064	2
		1.000Ω	0.999868	0.000132	0.0060	2
		10.900Ω	10.900121	-0.000121	0.0013	2
	32.9999Ω	32.9000Ω	32.90014	-0.00014	0.0013	2
	109.9999Ω	109.9000Ω	109.90028	-0.00028	0.0013	2
	329.9999Ω	329.9000Ω	329.9064	-0.0064	0.0013	2
	1.099999kΩ	1.090000kΩ	1.090085	-0.000085	0.0013	2
	3.299999kΩ	3.290000kΩ	3.290042	-0.000042	0.0013	2
	10.99999kΩ	10.90000kΩ	10.900021	-0.000021	0.0013	2
32.99999kΩ	32.90000kΩ	32.90016	-0.00016	0.0013	2	
109.9999kΩ	109.9000kΩ	109.90034	-0.00034	0.0013	2	
Resistance : 4 Wire Mode	10.9999Ω	0.100Ω	0.1000128	-0.0000128	0.0064	2
		1.000Ω	0.9999417	0.0000583	0.0060	2
		10.900Ω	10.900041	-0.000041	0.0013	2
	32.9999Ω	32.9000Ω	32.90019	-0.00019	0.0013	2
	109.9999Ω	109.9000Ω	109.90004	-0.00004	0.0013	2
	329.9999Ω	329.9000Ω	329.9000	0.0000	0.0013	2
	1.099999kΩ	1.090000kΩ	1.0899973	0.0000027	0.0013	2
	3.299999kΩ	3.290000kΩ	3.289981	0.000019	0.0013	2
	10.99999kΩ	10.90000kΩ	10.899968	0.000032	0.0013	2
32.99999kΩ	32.90000kΩ	32.89994	0.00006	0.0013	2	
109.9999kΩ	109.9000kΩ	109.90008	-0.00008	0.0013	2	
Resistance : COMP Off Mode	329.9999kΩ	329.9000kΩ	329.9006	-0.0006	0.0014	2
	1.099999MΩ	1.090000MΩ	1.099931	-0.009931	0.0013	2
	3.299999MΩ	3.290000MΩ	3.289905	0.000095	0.0053	2
	10.99999MΩ	10.90000MΩ	10.900141	-0.000141	0.0031	2
	32.99999MΩ	32.9000MΩ	32.89046	0.00954	0.0422	2
	109.9999MΩ	109.9000MΩ	109.90317	-0.00317	0.0200	2
	329.9999MΩ	329.900MΩ	329.802	0.098	0.2300	2
1100MΩ	1100.00MΩ	1,100.048	-0.048	0.2300	2	



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Range		UUC Reading	Standard Reading	Error	Measurement Uncertainty ±(%)	Coverage Factor @ C.L 95.45 (k)	
Frequency	119.99Hz, 3V	1.00Hz	0.99999835	0.00000165	0.0020	2	
	119.99Hz, 3V	5.00Hz	5.00004878	-0.00004878	0.0020	2	
	119.99Hz, 3V	50.00Hz	50.00002229	-0.00002229	0.0009	2	
	1199.9Hz, 3V	120.00Hz	119.99992477	0.00007523	0.0009	2	
	1199.9Hz, 3V	500.0Hz	499.99991172	0.00008828	0.0009	2	
	1199.9Hz, 3V	1000.0Hz	999.99995497	0.00004503	0.0008	2	
	1.199kHz, 3V	1.200kHz	1.19999922	0.00000078	0.0008	2	
	11.999kHz, 3V	12.000kHz	11.9999932	0.0000068	0.0008	2	
	119.99kHz, 3V	120.00kHz	119.99991399	0.00008601	0.0008	2	
	119.99kHz, 3V	500.0kHz	499.99964188	0.00035812	0.0008	2	
	2MHz, 3V	1.2000MHz	1.199999143	0.000000857	0.0008	2	
2MHz, 3V	2.000MHz	1.999993401	0.000006599	0.0008	2		
CAPACITANCE@100Hz		10.0000µF	9.99512	0.00488	0.22	2	
		11.0000µF	10.9912	0.0088	0.22	2	
		15.0000µF	14.9908	0.0092	0.22	2	
		32.9000µF	32.9021	-0.0021	0.22	2	
		33.000µF	33.0287	-0.0287	0.22	2	
		50.000µF	50.0768	-0.0768	0.22	2	
CAPACITANCE@1000Hz		100.000µF	100.027	-0.027	0.22	2	
		0.4000nF	0.400285	-0.000285	0.70	2	
		1.0000nF	1.00035	-0.00035	0.70	2	
		1.1000nF	1.10038	-0.00038	0.70	2	
		1.5000nF	1.50098	-0.00098	0.70	2	
		3.0000nF	3.00391	-0.00391	0.70	2	
		3.3000nF	3.30679	-0.00679	0.70	2	
		5.0000nF	5.00589	-0.00589	0.70	2	
		10.000nF	10.0006	-0.0006	0.70	2	
		11.000nF	10.9988	0.0012	0.22	2	
		15.000nF	14.9941	0.0059	0.22	2	
		32.000nF	31.9891	0.0109	0.22	2	
		33.000nF	32.9924	0.0076	0.22	2	
		50.000nF	49.9887	0.0113	0.22	2	
		100.00nF	99.9623	0.0377	0.22	2	
110.00nF	109.982	0.018	0.22	2			
150.00nF	149.949	0.051	0.22	2			
329.00nF	328.953	0.047	0.22	2			



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CAPACITANCE@1000Hz	1.0000µF	1.00164	-0.00164	0.22	2
	10.0000µF	9.99514	0.00486	0.22	2
	11.0000µF	10.9918	0.0082	0.22	2
	15.0000µF	14.9912	0.0088	0.22	2
	32.9000µF	32.9042	-0.0042	0.22	2
	33.000µF	33.0288	-0.0288	0.22	2
	50.000µF	50.0770	-0.0770	0.22	2
	100.000µF	100.035	-0.035	0.22	2
	110.000µF	110.141	-0.141	0.22	2
	150.000µF	150.281	-0.281	0.22	2
	329.999µF	329.996	0.003	0.22	2
	0.33000mF	0.330215	-0.000215	0.22	2
	0.50000mF	0.502883	-0.002883	0.22	2
	1.00000mF	0.999568	0.000432	0.22	2
Source: Thermocouple : K type	-200.00°C	-199.15	-0.85	0.02°C	2
	-100.00°C	-100.11	0.11	0.02°C	2
	0.00°C	-0.01	0.01	0.02°C	2
	200.00°C	199.874	0.126	0.02°C	2
	400.00°C	399.918	0.082	0.02°C	2
	800.00°C	799.913	0.087	0.02°C	2
	1000.00°C	999.865	0.135	0.02°C	2
	1370.00°C	1,369.914	0.086	0.02°C	2
Source: Thermocouple : S type	0.00°C	0.01	-0.01	0.04°C	2
	100.00°C	99.89	0.11	0.04°C	2
	400.00°C	399.88	0.12	0.04°C	2
	800.00°C	799.85	0.15	0.04°C	2
	1200.00°C	1,199.86	0.14	0.04°C	2
	1767.00°C	1,766.82	0.18	0.04°C	2
Source : RTD 385 (PT100)	-200.000°C	-199.999	-0.001	0.012°C	2
	-100.000°C	-100.007	0.007	0.012°C	2
	-50.000°C	-50.008	0.008	0.012°C	2
	0.000°C	-0.001	0.001	0.012°C	2
	50.000°C	50.002	-0.002	0.012°C	2
	100.000°C	99.994	0.006	0.012°C	2
	200.000°C	199.996	0.004	0.012°C	2
	400.000°C	399.986	0.014	0.012°C	2
	600.000°C	599.982	0.018	0.012°C	2
800.000°C	799.981	0.019	0.012°C	2	



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Range	UUC Reading	Standard Reading	Error	Measurement Uncertainty ±(%)	Coverage Factor @ C.L 95.45 (k)	
Measure: Thermocouple :K type	-199.95°C	-200.00	0.05	0.04°C	2	
	0.02°C	0.00	0.02	0.04°C	2	
	200.04°C	200.00	0.04	0.04°C	2	
	400.04°C	400.00	0.04	0.04°C	2	
	800.03°C	800.00	0.03	0.04°C	2	
	1,372.06°C	1370.00	2.06	0.04°C	2	
Measure: Thermocouple : S type	0.02°C	0.00	0.02	0.15°C	2	
	100.04°C	100.00	0.04	0.15°C	2	
	400.08°C	400.00	0.08	0.15°C	2	
	800.06°C	800.00	0.06	0.15°C	2	
	1,200.08°C	1200.00	0.08	0.15°C	2	
	1,767.00°C	1767.00	0.00	0.15°C	2	
Thermocouple Sourcing 10µV/°C mode	200.00°C	200.02	-0.02	0.20°C	2	
	-200.00°C	-199.98	-0.02	0.20°C	2	
	1000.00°C	1,000.06	-0.06	0.20°C	2	
	-1000.00°C	-999.96	-0.04	0.20°C	2	
	10000.00°C	10,000.12	-0.12	0.20°C	2	
	-10000.00°C	-9,999.96	-0.04	0.20°C	2	
Thermocouple Measurement 10µV/°C mode	9,999.96°C	10000.00	-0.04	0.10°C	2	
	-9,999.99°C	-10000.00	0.01	0.10°C	2	
	30,000.06°C	30000.00	0.06	0.10°C	2	
	-29,999.08°C	-30000.00	0.92	0.10°C	2	
Phase Angle : 3V/1V/50Hz	0.10°	0.10°	0.101	-0.001	1.20°	2
	30.00°	30.00°	30.006	-0.006	1.20°	2
	45.00°	45.00°	45.006	-0.006	1.20°	2
	60.00°	60.00°	60.009	-0.009	1.20°	2
	90.00°	90.00°	90.003	-0.003	1.20°	2
Scope : DC Voltage	130Vdc at 1 MΩ	1.000mV	0.99634	0.00366	0.1300	2
		10.000mV	9.99684	0.00316	0.0130	2
		109.90mV	109.90135	-0.00135	0.0008	2
		2.1900V	2.190221	-0.000221	0.0008	2
		11.00V	10.999934	0.000066	0.0008	2
		130.00V	130.00577	-0.00577	0.0008	2
Scope : DC Voltage	6.6Vdc at 50Ω	1.000mV	1.00054	-0.00054	0.1300	2
		10.000mV	10.01571	-0.01571	0.0130	2
		109.90mV	109.90645	-0.00645	0.0008	2
		2.1900V	2.191127	-0.001127	0.0008	2
		6.599V	6.602911	-0.003911	0.0008	2



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CERTIFICATE OF CALIBRATION

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 Mumbai - 400079.
 Dir.: +91-22-67965914-48

FR-QT-21		Certificate No. M-220302-22-1		ULR Number : CC26342200009849F		
Range		UUC Reading	Standard Reading	Error	Measurement Uncertainty ±(%)	Coverage Factor @ C.L 95.45 (k)
Scope Option : AC Voltage (Square Wave)	130Vp-p at 1kHz at 1MΩ	10.000mV	10.0076	-0.0076	0.0280	2
		109.90mV	109.8892	0.0108	0.0063	2
		2.1900V	2.1997	-0.0097	0.0030	2
		11.00V	10.9963	0.0037	0.0035	2
		130.00V	129.9423	0.0577	0.0041	2
	6.6Vp-p at 1kHz at 50Ω	10.0000mV	10.0076	-0.0076	0.0280	2
		109.90mV	109.9447	-0.0447	0.0063	2
		2.1900V	2.19206	-0.00206	0.0030	2
		6.599V	6.6048	-0.0058	0.0032	2
		Leveled SineWave : Flatness 50Ω @ 5 mVp-P	50kHz	5.00mV	5.0042	-0.0042
10MHz	5.00mV		5.0046	-0.0046	0.32dB	2
50MHz	5.00mV		5.041	-0.041	0.32dB	2
100MHz	5.00mV		5.083	-0.083	0.38dB	2
200MHz	5.00mV		5.098	-0.098	0.38dB	2
300MHz	5.00mV		5.156	-0.156	0.42dB	2
500MHz	5.00mV		5.229	-0.229	0.52dB	2
600MHz	5.00mV		5.321	-0.321	0.52dB	2
Leveled SineWave : Flatness 50Ω @ 10 mVp-p	50kHz	10.00mV	9.968	0.032	0.32dB	2
	10MHz	10.00mV	10.451	-0.451	0.32dB	2
	50MHz	10.00mV	10.482	-0.482	0.32dB	2
	100MHz	10.00mV	10.094	-0.094	0.38dB	2
	200MHz	10.00mV	10.188	-0.188	0.38dB	2
	300MHz	10.00mV	10.221	-0.221	0.42dB	2
	500MHz	10.00mV	10.223	-0.223	0.52dB	2
	600MHz	10.00mV	10.196	-0.196	0.52dB	2
1000MHz	10.00mV	10.231	-0.231	1.32dB	2	



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 Dir.: +91-22-67965914-48

FR-QT-21		ULR Number : CC26342200009849F				
Certificate No. M-220302-22-1						
Range		UUC Reading	Standard Reading	Error	Measurement Uncertainty ±(%)	Coverage Factor @ C.L 95.45 (k)
Leveled SineWave : Flatness 50Ω @ 30 mVp-p	50kHz	30.0mV	29.974	0.026	1.3dB	2
	10MHz	30.0mV	30.008	-0.008	1.3dB	2
	50MHz	30.0mV	30.034	-0.034	1.3dB	2
	100MHz	30.0mV	29.728	0.272	1.3dB	2
	200MHz	30.0mV	29.678	0.322	1.3dB	2
	300MHz	30.0mV	29.902	0.098	1.3dB	2
	500MHz	30.0mV	30.026	-0.026	1.3dB	2
Timer Marker Function :		5.000S	4.99991159	0.00008841	0.0030	2
		1.000S	0.9999842865	0.0000157135	0.0030	2
		50.00mS	49.99992992	0.00007008	0.0300	2
		20.00mS	19.9999821	0.0000179	0.0300	2
		100.0nS	99.98	0.02	0.0600	2
		50.00nS	49.96	0.04	0.0600	2
		10.00nS	9.98	0.02	0.0600	2
		5.000nS	4.96	0.04	0.0600	2
AC Power @50Hz @UNITY PF	120V,0.01A	1.200W	1.2006	-0.0006	2.9500	2
	120V,0.1A	12.00W	12.001	-0.001	2.9200	2
	120V,1A	120.0W	120.018	-0.018	2.9200	2
	230V,5A	1150.0W	1,149.96	0.04	0.1200	2
	240V,20A	4800.0W	4,799.95	0.05	0.1200	2
Power @50Hz @ 0.2Lag	120V,0.01A	0.240W	0.2400	0.0000	2.9200	2
	120V,0.1A	2.400W	2.4003	-0.0003	2.9201	2
	120V,1A	24.00W	24.0093	-0.0093	2.9200	2
	230V,5A	230.0W	230.051	-0.051	0.5600	2
	120V,10A	240.0W	240.122	-0.122	0.5600	2
	240V,10A	480.0W	480.18	-0.18	0.5600	2
	240V,20A	960.0W	959.96	0.04	0.5600	2



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 Dir.: +91-22-67965914-48

FR-QT-21		Certificate No. M-220302-22-1		ULR Number : CC26342200009849F		
Range		UUC Reading	Standard Reading	Error	Measurement Uncertainty ±(%)	Coverage Factor @ C.L 95.45 (k)
Power @50Hz @ 0.2Lead	120V,0.01A	0.240W	0.2402	-0.0002	2.9200	2
	120V,0.1A	2.400W	2.4003	-0.0003	2.9201	2
	120V,1A	24.00W	24.0022	-0.0022	2.9200	2
	230V,5A	230.0W	230.020	-0.020	0.5600	2
	120V,10A	240.0W	240.017	-0.017	0.5600	2
	240V,10A	480.0W	480.12	-0.12	0.5600	2
	240V,20A	960.0W	960.116	-0.116	0.5600	2
Power Factor : 0.1 PF to 1 PF	UPF	1.000PF	1.00000	0.00000	0.03pF	2
	0.8Lag	0.800PF	0.80015	-0.00015	0.03pF	2
	0.5Lag	0.500PF	0.50028	-0.00028	0.03pF	2
	0.2Lag	0.200PF	0.20033	-0.00033	0.03pF	2
	0.1Lag	0.100PF	0.10019	-0.00019	0.03pF	2
	0.1Lead	0.100PF	0.09994	0.00006	0.03pF	2
	0.2Lead	0.200PF	0.19989	0.00011	0.03pF	2
	0.5Lead	0.500PF	0.49988	0.00012	0.03pF	2
	0.8Lead	0.800PF	0.79999	0.00001	0.03pF	2
DC Power	100V,0.01A	1.000W	0.999	0.001	3.8200	2
	10V,1A	10.00W	10.0029	-0.0029	3.8000	2
	100V,1A	100.0W	100.005	-0.005	3.2000	2
	230V,5A	1150.0W	1,150.02	-0.02	1.5000	2
	415V,10A	4150W	4,149.74	0.26	0.8000	2
	600V,20A	12000W	11,999.81	0.19	0.5000	2
	1000V,20A	20000W	19,999.69	0.31	0.5000	2



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FR-QT-21

Certificate No.:M-230228-3-1

ULR:CC263423000009707F

Remarks:

1. Equipment used for calibration were calibrated & traceable to National & International Standards.
2. This report refers only to particular item (s) submitted for calibration.
3. Godrej Calibration Services is not liable for any change in calibration data & performance specifications on account of malfunctioning of Standards / Instruments / Equipment covered by this report due to damage caused to it after issuance of this report.
4. The calibration results reported are valid at the time of and under the stated conditions of the measurements.
5. The Certificate should not be reproduced except in full without the prior permission from Godrej Calibration Service.
6. Satisfactory calibration report in no ways implies that the equipment calibrated is approved by NABL.
7. All precautions have been taken for any error or omission while calibrating the instruments and issuing this certificate. However Godrej Calibration Services shall not be liable for any loss or liability that may be arise to any party in this regards.
8. Readings given are average of 3 Measurements.
9. The reported Expanded Uncertainty is calculated at 95.45 % Confidence level with coverage factor $k=2$.

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FR-QT-21			
Certificate No.	: M-230228-3-2	Date of Issue	: 07-Mar-23
Date of Calibration	: 02-Mar-23	Recom. Due Date	: 02-Mar-24
Customer Details :			
NATIONAL CENTRE FOR QUALITY CALIBRATION 4, Abhishree Corporate Park, Nr. Swagat Bungalows BRTS, Opp. Shell Petrol Pump, Isckon-Bopal Road Ambli Ahmedabad Gujarat India 380058		Calibrated at	: Lab
		Date of Receipt	: 28-Feb-23
		Cond. On Receipt	: Satisfactory
		Receipt No.	: M-230228-3
Details of Under Calibration instrument			
Name	: Current Coil With Multi-Product	Range	: As Per Report
Make	: Fluke	Sr. No.	: 20080897
L.C.	: As Per Report	Model	: 5500A
Details of Master Equipment			
Name	ID No./Sr. No.	Valid Upto	Traceability
AC Current Clamp with DMM500A	LQE140/MY45019697,170132908	04-Aug-23	IDEMI Mumbai
AC Current Clamp with DMM1000A	LQE141/MY45019697,170203427	04-Aug-23	IDEMI Mumbai
Work Instruction No.	: WI-ET-49		
Environmental Details :	Temperature : 25±2°C	Relative Humidity : 50±20% RH	
REMARK :			
1. Calibration Points are taken as per Customer's Request.			
2. Group : Electro-Technical, Discipline : Direct Current, Alternating Current < 1 GHz.			
AUTHORIZED SIGNATORY : AK Kulkarni			
DESIGNATION		ASSO MANAGER	
CALIBRATED BY : Lab Engineer : Bhavesh Patil			



Validity unknown

Digitally signed by DS/M/S/GODREJ AND
BOYCE MFG CO LTD
Date: 2023.03.10 11:01:05:30
Reason: Calibration Certificate
Location: Mumbai



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FR-QT-21				
Certificate No. :M-230228-3-2				
Range	Set Reading on UUC	Standard reading	Error	Measurement Uncertainty \pm (%)
DC Current: 1000A DC With Current Coil:	10.1A	10.1	0.0	--
	50.3A	50.3	0.0	--
	99.8A	99.9	-0.1	--
	199.8A	199.9	-0.1	--
	498A	499	-1	--
	798A	799	-1	--
	996A	997	-1	--
AC Current: 1000A AC @ 50Hz With Current Coil:	10.1A	10.1	0.0	--
	50.2A	50.1	0.1	--
	99.8A	99.8	0.0	--
	199.9A	199.9	0.0	--
	498A	499	-1	--
	799A	799	0	--
	998A	998	0	--



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Remarks:

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2. This report refers only to particular item (s) submitted for calibration.
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4. The calibration results reported are valid at the time of and under the stated conditions of the measurements.
5. The Certificate should not be reproduced except in full without the prior permission from Godrej Calibration Service.
6. The above instrument has been calibrated as per customer request and does not cover under our scope of accreditation.
7. All precautions have been taken for any error or omission while calibrating the instruments and issuing this certificate. However Godrej Calibration Services shall not be liable for any loss or liability that may be arise to any party in this regards.
8. Readings given are average of 3 Measurements.

----- End Of Certificate-----



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