

LCR Meter BS Home Calibration Test

Test Frequency:					
Test Frequency	Test Limits	ST2832 Result		ST42 Result	
20 Hz	19.99 - 20.01	20.000159			
50 Hz	49.99 - 50.01	50.000859			
100 Hz	99.99 - 100.01	99.99941		100.00028	
1 kHz	999.9 - 1000.1	999.99357		1.0000272	
10 kHz	9.999 - 10.001	9.9999366		10.000261	
100 kHz	99.99 - 100.01	99.999363			
200 kHz	199.98 - 200.02	199.99873			

Test Signal Level (1kHz):					
Signal Level	Test Limits	ST2832 Result (Vrms)		ST42 Result (Vpp)	
20 mVrms	16.00 - 24.00	19.112			
0.1 Vrms	0.088 - 0.112	0.0963357		0.101071460	.1 Vpp
0.3 Vrms	0.268 - 0.332	0.290526		507.4206168	.5 Vpp
1 Vrms	0.898 - 1.102	0.972234		1.013288442	1 Vpp
2 Vrms	1.798 - 2.202	1.944448			

DC Bias Level:					
Signal Level	Test Limits	ST2832 Result			
2V	1.975 - 2.025	2.007906			
5V	4.945 - 5.055	5.00565			

Resistance Measurements (Test Parameters Level: 1Vrms, Range: Auto, Speed: Slow):					
100Hz Resistance Measurement:					
Range		ST2832 Result		ST42 Result	
1 Ω		0.99928		0.9951	
10 Ω		10.0055		10.00	
100 Ω		99.9586		99.97	
1 k Ω		999.728		1.000	
10 k Ω		9.99983		10.00	
100 k Ω		100.072		100.1	
1 M Ω		1.00135		1.001	
10 M Ω		10.0313		9.985	

1 kHz Resistance Measurement:					
Range		ST2832 Result		ST42 Result	
1 Ω		0.99916		1.004	
10 Ω		10.0055		10.00	
100 Ω		99.9548		99.96	
1 k Ω		999.735		1.000	
10 k Ω		9.99975		10.00	
100 k Ω		100.064		100.1	
1 M Ω		1.00062		1.000	
10 M Ω		9.91982		9.932	

10 kHz Resistance Measurement:					
Range		ST2832 Result		ST42 Result	
1 Ω		0.99903		Fail	
10 Ω		10.0054		Fail	
100 Ω		99.9588		Fail	
1 k Ω		999.73		954.8	
10 k Ω		9.99868		9.958	
100 k Ω		99.9563		99.99	
1 M Ω		992.645		994.3	

100 kHz Resistance Measurement:					
Range		ST2832 Result			
1 Ω		0.99769			
10 Ω		9.98886			
100 Ω		99.9551			
1 k Ω		998.588			
10 k Ω		9.87567			
100 k Ω		98.0889			

200 kHz Resistance Measurement:					
Range		ST2832 Result			
1 Ω		0.99706			
10 Ω		9.9994			
100 Ω		99.9134			
1 k Ω		994.505			
10 k Ω		9.93729			

DCR Measurement:					
Range		ST2832 Result		ST42 Result	
1 Ω		999.333		1.006	
10 Ω		10.0054		10.01	
100 Ω		100.006		99.94	
1 k Ω		999.777		999.7	
10 k Ω		9.99969		10.00	
100 k Ω		100.075		100.0	
1 M Ω		1.00071		1.003	
10 M Ω		10.0367		10.13	

Step Dissipation Factor (Cs=1nF,1kHz): (Ignore Ref / Test Limits for now)			
Range	Reference	ST2832 Result	Test Limits
0.0001	0.00010	0.00015	-0.00042 ~ 0.00062
0.0005	0.00050	0.00046	-0.00002 ~ 0.00102
0.001	0.00100	0.001	0.00048 ~ 0.00152
0.005	0.00500	0.005	0.00448 ~ 0.00552
0.01	0.01000	0.01011	0.00948 ~ 0.01052
0.1	0.09990	0.10105	0.09938 ~ 0.10042
1	0.99860	0.99409	0.99808 ~ 0.99912

Capacitance Measurements (Upper Value: Capacitance (Cp), Lower Value: Dissipation Factor (D)):					
1 kHz Capacitance Measurement					
Range	Tolerance:	ST2832 Result		ST42 Result	
10 pF	1%	10.4693		10.54	
		0.00059			
100 pF	1%	101.405		101.3	
		0.00002			
1 nF	1%	1.00377		1.004	
		0.00017			
10 nF	1%	9.93588		9.934	
		0.00015			
100 nF	1%	99.2411		99.22	
		0.00006			
1.0 µF	5%	1.07651		1.017	
		0.01095			
10 µF	5%	8.95932		8.344	
		0.02007			
100 µF	10%	74.1251		70.71	
		0.03165			

20 Hz Capacitance Measurement					
Range	Tolerance:	ST2832 Result			
10 nF	1%	9.9353			
		0.00005			
100 nF	1%	99.2412			
		0.00052			
1.0 µF	5%	1.10237			
		0.01959			
10 µF	5%	11.3193			
		0.05375			
100 µF	10%	107.926			
		0.07591			
1 mF	20%	1.01603			
		0.03934			

100 Hz Capacitance Measurement					
Range	Tolerance:	ST2832 Result		ST42 Result	
1 nF	1%	1.00254		1.006	
		0.00024			
10 nF	1%	10.5028		9.940	
		0.01957			
100 nF	1%	109.449		99.21	
		0.00613			
1.0 µF	5%	1.09541		1.032	
		0.02113			
10 µF	5%	10.8845		9.251	
		0.04676			
100 µF	10%	90.4477			
		0.06176			
1 mF	20%	1.00115			
		0.14897			

10 kHz Capacitance Measurement					
Range	Tolerance:	ST2832 Result		ST42 Result	
10 pF	1%	10.5195		10.35	
		0.00021			
100 pF	1%	101.421		101.0	
		0.00038			
1 nF	1%	1.00372		1.003	
		0.0003			
10 nF	1%	9.93525		9.934	
		0.00014			
100 nF	1%	99.2628		99.38	
		0.00017			
1.0 µF	5%	1.00976		1.003	
		0.01302			
10 µF	5%	8.31869		9.071	
		0.02216			

100 kHz Capacitance Measurement					
Range	Tolerance:	ST2832 Result			
10 pF	1%	10.6738			
		0.00009			
100 pF	1%	102.574			
		0.00013			
1 nF	1%	1.00427			
		0.00049			
10 nF	1%	9.93939			
		0.00069			
100 nF	1%	99.8059			
		0.00135			
1 μF	1%	1.03064			
		0.2827			

200 kHz Capacitance Measurement					
Range	Tolerance:	ST2832 Result			
10 pF	1%	10.6004			
		0.00141			
100 pF	1%	104.342			
		0.00027			
1 nF	1%	1.00376			
		0.00055			
10 nF	1%	9.95592			
		0.00052			
100 nF	1%	101.589			
		0.00304			
1 μF	1%	1.1749			
		0.05165			

1 kHz Inductance Measurement:					
Range		ST2832 Result		ST42 Result	
1 mH		962.369		942.8	
10 mH		10.5061		10.44	
100 mH		113.089		100.7	
~600 mH (Wah)		602.138		584.5	

10 kHz Inductance Measurement:					
Range		ST2832 Result		ST42 Result	
10 µH		11.0507		13.87	
100 µH		113.277		113.4	
1 mH		1.14956		0.9437	
10 mH		10.3839		10.31	
100 mH		97.3937		100.5	
700 mH (Wah)		586.546		598.5	

100 kHz Inductance Measurement:					
Range		ST2832 Result			
100 nH					
1 µH					
10 µH		10.8667			
100 µH		109.896			
1 mH		916.927			
10 mH		9.55745			

200 kHz Inductance Measurement:					
Range		ST2832 Result			
100 nH					
1 µH					
10 µH		10.6688			
100 µH		105.792			
1 mH		891.042			
10 mH		10.1093			

Test date:	7/1/2024	Warm up time:	HOURS	
RH:	53%	Open/short correction:	Yup	SDM3065X for voltages
Room Temp:	26.1C			SDG2122X for freq count