

### ANNEXURE-1

SNO	MATCODE	MDESC	QUANTITY	UNIT
1	HW8411111016	DRG: NA REV: -- IC HCF4093 QUAD 2-INPUT NAND GATE, 14 PIN, SO14 PACKAGE.	11	NO
2	HW8411111024	DRG: NA REV: -- IC HEF4047 MONOSTABLE/ASTABLE MULTIVIBRATOR, 14 PIN, SO14 PACKAGE	1	NO
3	HW8411111032	DRG: NA REV: -- IC HEF4049BT HEX INVERTING BUFFERS 16 PIN SO16/SOT109-1.	1	NO
4	HW8411111040	DRG: NA REV: -- IC LM311 COMPARATOR OPERATIONAL AMPLIFIER, 8 PIN, PDIP-8 PACKAGE.	10	NO
5	HW8411111059	DRG: NA REV: -- IC LM324 QUAD OPERATIONAL AMPLIFIER, 14PIN, SOIC 14 PACKAGE.	9	NO
6	HW8411111067	DRG: NA REV: -- LM 358 DUAL OPERATIONAL AMPLIFIER 8PIN, SOP 8 PACKAGE.	7	NO
7	HW8411111075	DRG: NA REV: -- IC LM393 DUAL COMPARATOR OPERATIONAL AMPLIFIER, 8 PIN, SOIC-8 PACKAGE	9	NO
8	HW8411111083	DRG: NA REV: -- IC NE555 SINGLE BIPOLAR TIMER , 8 PIN, N DIP PACKAGE.	7	NO
9	HW8411111091	DRG: NA REV: -- IC OP07C OPERATIONAL AMPLIFIER , 8PIN, SIOC 8 PACKAGE.	6	NO
10	HW8411111105	DRG: NA REV: -- IC SIE20034, 8 PIN, DIP PACKAGE	35	NO
11	HW8411111113	DRG: NA REV: -- IC TDA4718 CONTROL IC , 18 PIN ,PDIP PACKAGE.	1	NO
12	HW8411111121	DRG: NA REV: -- IC UC3843 CURRENT-MODE PWM CONTROLLERS, 8 PIN, PDIP-8 PACKAGE.	6	NO
13	HW8411111130	DRG: NA REV: -- IC UC3843 CURRENT-MODE PWM CONTROLLERS,14 PIN ,SOIC-14 PACKAGE.	5	NO
14	HW8411111148	DRG: NA REV: -- NPN TRANSISTOR BC639, COLLECTOR EMITTER VOLTAGE 80V, COLLECTOR CURRENT 1A, TO 92 PACKAGE	9	NO

15	HW8411111156	DRG: NA REV: -- NPN TRANSISTOR BCP55, COLLECTOR EMITTER VOLTAGE 60V, COLLECTOR CONTINUOUS CURRENT 1.5A, SOT223 PACKAGE	2	NO
16	HW8411111164	DRG: NA REV: -- NPN TRANSISTOR BDP947, COLLECTOR EMITTER VOLTAGE 45V, COLLECTOR CONTINUOUS CURRENT 3A, SOT223 PACKAGE	28	NO
17	HW8411111172	DRG: NA REV: -- PNP TRANSISTOR BC640, COLLECTOR EMITTER VOLTAGE 80V, COLLECTOR CURRENT 1A, TO 92 PACKAGE	8	NO
18	HW8411111180	DRG: NA REV: -- PNP TRANSISTOR BCP53, COLLECTOR TO EMITTER VOLTAGE 80V, COLLECTOR CURRENT 1 A, SOT223 PACKAGE	4	NO
19	HW8411111199	DRG: NA REV: -- PNP TRANSISTOR BDP948, COLLECTOR EMITTER VOLTAGE 45V, COLLECTOR CONTINUOUS CURRENT 3A, SOT223 PACKAGE	21	NO
20	HW8411111202	DRG: NA REV: -- PNP TRANSISTOR FZT751, COLLECTOR EMITTER VOLTAGE 60V, COLLECTOR CURRENT 3A, SOT 223 PACKAGE	3	NO
21	HW8411111210	DRG: NA REV: -- IGBT BUP313, COLLECTOR EMITTER VOLTAGE 1200V, COLLECTOR CURRENT AT 90 DEGREE CELCIUS 20A, TO- 218 PACKAGE	8	NO
22	HW8411111229	DRG: NA REV: -- VOLTAGE REGULATOR KA7824, 3 PIN, 24V 1A OUTPUT, TO 220 PACKAGE	7	NO
23	HW8411111237	DRG: NA REV: -- VOLTAGE REGULATOR LM317, 3 PIN, 1.2-37V 1.5A OUTPUT, TO 220 PACKAGE	6	NO
24	HW8411111245	DRG: NA REV: -- N CHANNEL MOSFET 2SK1120, DRAIN TO SOURCE VOLTAGE 1000V, DRAIN CURRENT 8S, SC 65 PACKAGE	1	NO
25	HW8411111253	DRG: NA REV: -- N CHANNEL MOSFET BUZ71A, DRAIN TO SOURCE VOLTAGE 50V, DRAIN CURRENT CONTINUOUS DRAIN CURRENT 13A, TO 220 PACKAGE	9	NO
26	HW8411111261	DRG: NA REV: -- N CHANNEL MOSFET IRF840, DRAIN TO SOURCE VOLTAGE 500V, DRAIN CURRENT CONTINUOUS DRAIN CURRENT 8A, TO 220 PACKAGE	11	NO

27	HW8411111270	DRG: NA REV: -- N CHANNEL MOSFET IRFG50, DRAIN TO SOURCE VOLTAGE 1000V, DRAIN CURRENT CONTINUOUS DRAIN CURRENT 6.1A, TO 247 PACKAGE	6	NO
28	HW8411111288	DRG: NA REV: -- N CHANNEL MOSFET IRFZ44N, DRAIN TO SOURCE VOLTAGE 55V, DRAIN CURRENT CONTINUOUS DRAIN CURRENT 49A, TO 220 PACKAGE	1	NO
29	HW8411111296	DRG: NA REV: -- N CHANNEL MOSFET STP6NK90Z, DRAIN TO SOURCE VOLTAGE 900V, DRAIN CURRENT CONTINUOUS DRAIN CURRENT 5.8A, TO 220 PACKAGE	7	NO
30	HW8411111318	DRG: NA REV: -- 1N4148 DIODE, REPETITIVE PEAK REVERSE VOLTAGE 100V, FORWARD AVERAGE CURRENT 0.5A, DO-35 PACKAGE	15	NO
31	HW8411111326	DRG: NA REV: -- 1N4948 DIODE, REPETITIVE PEAK REVERSE VOLTAGE 1000V, FORWARD AVERAGE CURRENT 1A, DO-41 PACKAGE	4	NO
32	HW8411111334	DRG: NA REV: -- BAW76TFK SMALL SIGNAL FAST SWITCHING DIODE, REPETITIVE PEAK REVERSE VOLTAGE 75V, FORWARD CONTINUOUS CURRENT 300 MA, DO-35 PACKAGE	19	NO
33	HW8411111342	DRG: NA REV: -- BYG21M FAST SMD RECTIFIER DIODE, REPETITIVE PEAK REVERSE VOLTAGE 1000V, FORWARD AVERAGE CURRENT 1.5A, DO-214AC PACKAGE	56	NO
34	HW8411111350	DRG: NA REV: -- BYM36G FAST SOFT RECOVERY CONTROLLED AVALANCHE RECTIFIER DIODE, REPETITIVE PEAK REVERSE VOLTAGE 1400V, FORWARD AVERAGE CURRENT AT 55 DEGREE CELCIUS 2.9A, SOD-64 PACKAGE	48	NO
35	HW8411111369	DRG: NA REV: -- BYW32 FAST AVALANCHE DIODE, REPETITIVE PEAK REVERSE VOLTAGE 600V, FORWARD AVERAGE CURRENT 2A, SOD-57 PACKAGE	8	NO
36	HW8411111377	DRG: NA REV: -- BZW06 342B TRANSIENT VOLTAGE SUPPRESSOR DIODE, STAND OFF VOLTAGE 342V, MAXIMUM REVERSE CURRENT 5 MICRO AMPERE, DO 15 PACKAGE	3	NO

37	HW8411111385	DRG: NA REV: -- DIODE DSEI 12-12A FAST RECOVERY DIODE, REPETITIVE PEAK REVERSE VOLTAGE 1200V, FORWARD AVERAGE CURRENT 11A, TO-220AC PACKAGE	5	NO
38	HW8411111393	DRG: NA REV: -- DSEI30-16A FAST RECOVERY DIODE, REPETITIVE PEAK REVERSE VOLTAGE 1600V, FORWARD AVERAGE CURRENT 30A, TO-220 PACKAGE	6	NO
39	HW8411111407	DRG: NA REV: -- DSEP 15-12CR FAST RECOVERY DIODE, REPETITIVE PEAK REVERSE VOLTAGE 1200V, FORWARD AVERAGE CURRENT 15A, TO-220AC PACKAGE	4	NO
40	HW8411111415	DRG: NA REV: -- MUR1620 ULTRA FAST RECTIFIER DIODE, REPETITIVE PEAK REVERSE VOLTAGE 200V DC, AVERAGE FORWARD CURRENT 8 A, TO 220 PACKAGE.	5	NO
41	HW8411111423	DRG: NA REV: -- SS14 RECTIFIER DIODE, REPETITIVE PEAK REVERSE VOLTAGE 40V, FORWARD AVERAGE CURRENT 1A, DO-214AC PACKAGE	2	NO
42	HW8411111431	DRG: NA REV: -- SS16 RECTIFIER DIODE, REPETITIVE PEAK REVERSE VOLTAGE 60V, FORWARD AVERAGE CURRENT 1A, DO-214AC PACKAGE	25	NO
43	HW8411111440	DRG: NA REV: -- BZX 55C16 ZENER DIODE, ZENER VOLTAGE 16V, REVERSE LEAKAGE CURRENT AT 25 DEGREE CELCIUS LESS THAN 0.1 MA, 0.5W, DO-35 PACKAGE	16	NO
44	HW8411111466	DRG: NA REV: -- CARBON FILM RESISTANCE 3.3 OHM 0.5 W	6	NO
45	HW8411111482	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 5.6 OHM, LENGTH X WIDTH 3.05MM X 1.6MM(1206)	14	NO
46	HW8411111490	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 10 OHM, LENGTH X WIDTH 1MM X 0.5MM(0402)	25	NO
47	HW8411111504	DRG: NA REV: -- THICK/THICK/THIN FILM CHIP RESISTANCE 24 OHM, LENGTH X WIDTH 4.5MM X 3.1MM(1812)	31	NO
48	HW8411111512	DRG: NA REV: -- CARBON FILM RESISTANCE 27 OHM 0.25W	7	NO

49	HW8411111520	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 33 OHM, LENGTH X WIDTH 4.5MM X 3.1MM(1812)	25	NO
50	HW8411111539	DRG: NA REV: -- CARBON FILM RESISTANCE 50 OHM 0.25W	4	NO
51	HW8411111547	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 100 OHM, LENGTH X WIDTH 1MM X 0.5MM(0402)	35	NO
52	HW8411111563	DRG: NA REV: -- CARBON FILM RESISTANCE 220 OHM 0.25W	2	NO
53	HW8411111571	DRG: NA REV: -- CARBON FILM RESISTANCE 330 OHM 0.25W	2	NO
54	HW8411111598	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 470 OHM, LENGTH X WIDTH 1MM X 0.5MM(0402)	18	NO
55	HW8411111610	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 620 OHM, LENGTH X WIDTH 6.3MM X 3.2MM(2512)	24	NO
56	HW8411111628	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 1 KOHM, LENGTH X WIDTH 2MM X 1.25MM(0805)	17	NO
57	HW8411111636	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 1.2 KOHM, LENGTH X WIDTH 4.5MM X 3.1MM(1812)	33	NO
58	HW8411111644	DRG: NA REV: -- CARBON FILM RESISTANCE 1.6 KOHM 0.25W	4	NO
59	HW8411111652	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 2.2KOHM, LENGTH X WIDTH 2MM X 1.25MM(0805)	34	NO
60	HW8411111660	DRG: NA REV: -- CARBON FILM RESISTANCE 3.3 KOHM 0.25W	2	NO
61	HW8411111679	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 4.7 KOHM, LENGTH X WIDTH 2MM X 1.25MM(0805)	8	NO
62	HW8411111687	DRG: NA REV: -- CARBON FILM RESISTANCE 5 KOHM 0.25W	8	NO
63	HW8411111695	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 5.6 KOHM, LENGTH X WIDTH 2MM X 1.25MM(0805)	8	NO
64	HW8411111709	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 6.8 KOHM, LENGTH X WIDTH 1MM X 0.5MM(0402)	20	NO
65	HW8411111717	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 7.5 KOHM, LENGTH X WIDTH 2MM X 1.25MM(0805)	31	NO

66	HW8411111725	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 10 KOHM, LENGTH X WIDTH 1MM X 0.5MM(0402)	14	NO
67	HW8411111733	DRG: NA REV: -- CARBON FILM RESISTANCE 13KOHM 0.25W	5	NO
68	HW8411111750	DRG: NA REV: -- CARBON FILM RESISTANCE 16KOHM 0.25W	4	NO
69	HW8411111768	DRG: NA REV: -- CARBON FILM RESISTANCE 33 KOHM 0.25W	8	NO
70	HW8411111776	DRG: NA REV: -- CARBON FILM RESISTANCE 42 KOHM 0.25W	9	NO
71	HW8411111784	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 47 KOHM, LENGTH X WIDTH 2MM X 1.25MM(0805)	6	NO
72	HW8411111792	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 56 KOHM, LENGTH X WIDTH 6.3MM X 3.2MM(2512)	16	NO
73	HW8411111806	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 100 KOHM, LENGTH X WIDTH 1MM X 0.5MM(0402)	15	NO
74	HW8411111814	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 150 KOHM, LENGTH X WIDTH 6.3MM X 3.2MM(2512)	14	NO
75	HW8411111822	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 180 KOHM, LENGTH X WIDTH 6.3MM X 3.2MM(2512)	19	NO
76	HW8411111830	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 220 KOHM, LENGTH X WIDTH 6.3MM X 3.2MM(2512)	15	NO
77	HW8411111849	DRG: NA REV: -- THICK/THIN FILM CHIP RESISTANCE 470 KOHM, LENGTH X WIDTH 1MM X 0.5MM(0402)	19	NO
78	HW8411112047	DRG: NA REV: -- SURFACE MOUNT TANTALUM CAPACITOR, CAPACITANCE 1.5 MICRO FARAD, RATE VOLTAGE 25 V, SIZE :LENGTH X WIDTH [3.5 +/- 0.20]X[2.8 +/- 0.20] MM	2	NO
79	HW8411112055	DRG: NA REV: -- SURFACE MOUNT TANTALUM CAPACITOR, CAPACITANCE 4.7 MICRO FARAD, RATED VOLTAGE 25 V, SIZE:LENGTH X WIDTH [3.5 +/- 0.20]X[2.8 +/- 0.20] MM	12	NO
80	HW8411112063	DRG: NA REV: -- SURFACE MOUNT TANTALUM CAPACITOR, CAPACITANCE 10 MICRO FARAD, RATED VOLTAGE 35 V, SIZE : LENGTH X WIDTH [7.3 +/- 0.30]X[4.3 +/- 0.30]	14	NO

81	HW8411111857	DRG: NA REV: -- RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITORS, CAPACITANCE 10 MICRO FARAD, RATED VOLTAGE 400V, CASE SIZE : (DIA. X HEIGHT) 10MM X 20MM.	14	NO
82	HW8411111865	DRG: NA REV: -- MULTILAYER CERAMIC CHIP CAPACITORS, CAPACITANCE 15 MICRO FARAD, RATE VOLTAGE 50V. SIZE :LENGTH X WIDTH [5.7 +/- 0.40]X[5.0 +/- 0.40]	28	NO
83	HW8411111873	DRG: NA REV: -- SOLID TANTALUM SURFACE MOUNT CHIP CAPACITOR, CAPACITANCE 22 MICRO FARAD, RATE VOLTAGE 25V, SIZE : LENGTH X WIDTH [7.3 +/- 0.30] X[4.3 +/- 0.30] MM.	20	NO
84	HW8411111881	DRG: NA REV: -- RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 22 MICRO FARAD, RATE VOLTAGE 50V, CASE SIZE : (DIA. X HEIGHT) 5MM X 11MM.	18	NO
85	HW8411111890	DRG: NA REV: -- RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 47 MICRO FARAD, RATE VOLTAGE 25V. SIZE : (DIA. X HEIGHT) 5MM X 11MM	27	NO
86	HW8411111903	DRG: NA REV: -- ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 100 MICRO FARAD, RATE VOLTAGE 35V. SIZE :(LENGTH X WIDTH)8.00+/- 0.50 8.00+/-0.50 MM.	21	NO
87	HW8411111911	DRG: NA REV: -- RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 120 MICRO FARAD, RATE VOLTAGE 25V. CASE SIZE : (DIA. X HEIGHT) 6.3MM X 15MM	6	NO
88	HW8411111920	DRG: NA REV: -- RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 120 MICRO FARAD, RATE VOLTAGE 35V. CASE SIZE : (DIA. X HEIGHT) 8MM X 12MM.	6	NO
89	HW8411111938	DRG: NA REV: -- RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 150 MICROFARAD, RATE VOLTAGE 35V. CASE SIZE : (DIA. X HEIGHT) 8MMX11.5MM.	4	NO

90	HW8411111946	DRG: NA REV: -- RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 220 MICROFARAD, RATE VOLTAGE 25V, CASE SIZE : (DIA. X HEIGHT) 8MMX11.5MM	7	NO
91	HW8411111954	DRG: NA REV: -- RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 220 MICROFARAD, RATE VOLTAGE 35V, CASE SIZE : (DIA. X HEIGHT) 10MMX12.5MM	18	NO
92	HW8411111962	DRG: NA REV: -- RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 330 MICROFARAD, RATE VOLTAGE 35V, CASE SIZE : (DIA. X HEIGHT) 10MMX16MM	8	NO
93	HW8411111970	DRG: NA REV: -- ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 330 MICROFARAD, RATED VOLTAGE 400V,CASE SIZE : (DIA. X HEIGHT) 35MMX50MM	49	NO
94	HW8411111989	DRG: NA REV: -- RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 470 MICROFARAD, RATED VOLTAGE 16V.CASE SIZE : (DIA. X HEIGHT) 10MMX12.5MM	13	NO
95	HW8411111997	DRG: NA REV: -- RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 470 MICROFARAD ,RATED VOLTAGE 35V. CASE SIZE : (DIA. X HEIGHT) 10MMX20MM	1	NO
96	HW8411112101	DRG: NA REV: -- ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 470 MICROFARAD, RATED VOLTAGE 400V. CASE SIZE : (DIA. X HEIGHT) 40MMX50MM	6	NO
97	HW8411112012	DRG: NA REV: -- RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 1500 MICROFARAD, RATED VOLTAGE 25V. CASE IZE : (DIA. X HEIGHT) 12.5MMX25MM.	14	NO
98	HW8411112020	DRG: NA REV: -- CYLENDRICAL FUSE, RATED CURRENT 4A, RATED VOLTAGE 500V AC, DIA X LENGTH 10MMX38MM +/-0.5MM	21	NO

99	HW8411112039	DRG: NA REV: -- DC BRUSHLESS FAN (SLEEVE /BALL BEARING), SUPPLY: 24V DC, 1WATT OR MORE SIZE: 60X60X25 MM.	12	NO
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**SCOPE FOR ELECTRONIC ITEMS OF LT/IR**

Sl. No.	Description	Quantity (in Nos.)	Accepted (Yes/No)	Deviation	Remarks
<b>1</b>	<b>MATERIAL SUPPLY INCLUDING SCOPE OF WORK, Technical specifications</b>				
1.1	IC HCF4093 QUAD 2-INPUT NAND GATE, 14 PIN, SO14 PACKAGE.	11			Bidder to provide details & comply
1.2	IC HEF4047 MONOSTABLE/ASTABLE MULTIVIBRATOR, 14 PIN, SO14 PACKAGE	1			Bidder to provide details & comply
1.3	IC HEF4049BT HEX INVERTING BUFFERS 16 PIN SO16/SOT109-1.	1			Bidder to provide details & comply
1.4	IC LM311 COMPARATOR OPERATIONAL AMPLIFIER, 8 PIN, PDIP-8 PACKAGE.	10			Bidder to provide details & comply
1.5	IC LM324 QUAD OPERATIONAL AMPLIFIER, 14PIN, SOIC 14 PACKAGE.	9			Bidder to provide details & comply
1.6	LM 358 DUAL OPERATIONAL AMPLIFIER 8PIN, SOP 8 PACKAGE.	7			Bidder to provide details & comply
1.7	IC LM393 DUAL COMPARATOR OPERATIONAL AMPLIFIER, 8 PIN, SOIC-8 PACKAGE	9			Bidder to provide details & comply
1.8	IC NE555 SINGLE BIPOLAR TIMER , 8 PIN, N DIP PACKAGE.	7			Bidder to provide details & comply
1.9	IC OP07C OPERATIONAL AMPLIFIER , 8PIN, SIOC 8 PACKAGE.	6			Bidder to provide details & comply
1.10	IC SIE20034, 8 PIN, DIP PACKAGE	35			Bidder to provide details & comply
1.11	IC TDA4718 CONTROL IC ,18 PIN ,PDIP PACKAGE.	1			Bidder to provide details & comply
1.12	IC UC3843 CURRENT-MODE PWM CONTROLLERS, 8 PIN, PDIP-8 PACKAGE.	6			Bidder to provide details & comply
1.13	IC UC3843 CURRENT-MODE PWM CONTROLLERS,14 PIN ,SOIC-14 PACKAGE.	5			Bidder to provide details & comply
1.14	NPN TRANSISTOR BC639, COLLECTOR EMITTER VOLTAGE 80V, COLLECTOR CURRENT 1A, TO 92 PACKAGE	9			Bidder to provide details & comply
1.15	NPN TRANSISTOR BCP55, COLLECTOR EMITTER VOLTAGE 60V, COLLECTOR CONTINUOUS CURRENT 1.5A, SOT223 PACKAGE	2			Bidder to provide details & comply
1.16	NPN TRANSISTOR BDP947, COLLECTOR EMITTER VOLTAGE 45V, COLLECTOR CONTINUOUS CURRENT 3A, SOT223 PACKAGE	28			Bidder to provide details & comply
1.17	PNP TRANSISTOR BC640, COLLECTOR EMITTER VOLTAGE 80V, COLLECTOR CURRENT 1A, TO 92 PACKAGE	8			Bidder to provide details & comply
1.18	PNP TRANSISTOR BCP53, COLLECTOR TO EMITTER VOLTAGE 80V, COLLECTOR CURRENT 1 A, SOT223 PACKAGE	4			Bidder to provide details & comply
1.19	PNP TRANSISTOR BDP948, COLLECTOR EMITTER VOLTAGE 45V, COLLECTOR CONTINUOUS CURRENT 3A, SOT223 PACKAGE	21			Bidder to provide details & comply
1.20	PNP TRANSISTOR FZT751, COLLECTOR EMITTER VOLTAGE 60V, COLLECTOR CURRENT 3A, SOT 223 PACKAGE	3			Bidder to provide details & comply
1.21	IGBT BUP313, COLLECTOR EMITTER VOLTAGE 1200V, COLLECTOR CURRENT AT 90 DEGREE CELCIUS 20A, TO-218 PACKAGE	8			Bidder to provide details & comply
1.22	VOLTAGE REGULATOR KA7824, 3 PIN, 24V 1A OUTPUT, TO 220 PACKAGE	7			Bidder to provide details & comply
1.23	VOLTAGE REGULATOR LM317, 3 PIN, 1.2-37V 1.5A OUTPUT, TO 220 PACKAGE	6			Bidder to provide details & comply

*[Handwritten signature]*

1.24	N CHANNEL MOSFET 2SK1120, DRAIN TO SOURCE VOLTAGE 1000V, DRAIN CURRENT 8S, SC 65 PACKAGE	1			Bidder to provide details & comply
1.25	N CHANNEL MOSFET BUZ71A, DRAIN TO SOURCE VOLTAGE 50V, DRAIN CURRENT CONTINUOUS DRAIN CURRENT 13A, TO 220 PACKAGE	9			Bidder to provide details & comply
1.26	N CHANNEL MOSFET IRF840, DRAIN TO SOURCE VOLTAGE 500V, DRAIN CURRENT CONTINUOUS DRAIN CURRENT 8A, TO 220 PACKAGE	11			Bidder to provide details & comply
1.27	N CHANNEL MOSFET IRFG50, DRAIN TO SOURCE VOLTAGE 1000V, DRAIN CURRENT CONTINUOUS DRAIN CURRENT 6.1A, TO 247 PACKAGE	6			Bidder to provide details & comply
1.28	N CHANNEL MOSFET IRFZ44N, DRAIN TO SOURCE VOLTAGE 55V, DRAIN CURRENT CONTINUOUS DRAIN CURRENT 49A, TO 220 PACKAGE	1			Bidder to provide details & comply
1.29	N CHANNEL MOSFET STP6NK90Z, DRAIN TO SOURCE VOLTAGE 900V, DRAIN CURRENT CONTINUOUS DRAIN CURRENT 5.8A, TO 220 PACKAGE	7			Bidder to provide details & comply
1.30	1N4148 DIODE, REPETITIVE PEAK REVERSE VOLTAGE 100V, FORWARD AVERAGE CURRENT 0.5A, DO-35 PACKAGE	15			Bidder to provide details & comply
1.31	1N4948 DIODE, REPETITIVE PEAK REVERSE VOLTAGE 1000V, FORWARD AVERAGE CURRENT 1A, DO-41 PACKAGE	4			Bidder to provide details & comply
1.32	BAW76TFK SMALL SIGNAL FAST SWITCHING DIODE, REPETITIVE PEAK REVERSE VOLTAGE 75V, FORWARD CONTINUOUS CURRENT 300 mA, DO-35 PACKAGE	19			Bidder to provide details & comply
1.33	BYG21M FAST SMD RECTIFIER DIODE, REPETITIVE PEAK REVERSE VOLTAGE 1000V, FORWARD AVERAGE CURRENT 1.5A, DO-214AC PACKAGE	56			Bidder to provide details & comply
1.34	BYM36G FAST SOFT RECOVERY CONTROLLED AVALANCHE RECTIFIER DIODE, REPETITIVE PEAK REVERSE VOLTAGE 1400V, FORWARD AVERAGE CURRENT AT 55 DEGREE CELCIUS 2.9A, SOD-64 PACKAGE	48			Bidder to provide details & comply
1.35	BYW32 FAST AVALANCHE DIODE, REPETITIVE PEAK REVERSE VOLTAGE 600V, FORWARD AVERAGE CURRENT 2A, SOD-57 PACKAGE	8			Bidder to provide details & comply
1.36	BZW06 342B TRANSIENT VOLTAGE SUPPRESSOR DIODE, STAND OFF VOLTAGE 342V, MAXIMUM REVERSE CURRENT 5 MICRO AMPERE, DO 15 PACKAGE	3			Bidder to provide details & comply
1.37	DIODE DSEI 12-12A FAST RECOVERY DIODE, REPETITIVE PEAK REVERSE VOLTAGE 1200V, FORWARD AVERAGE CURRENT 11A, TO-220AC PACKAGE	5			Bidder to provide details & comply
1.38	DSEI30-16A FAST RECOVERY DIODE, REPETITIVE PEAK REVERSE VOLTAGE 1600V, FORWARD AVERAGE CURRENT 30A, TO-220 PACKAGE	6			Bidder to provide details & comply
1.39	DSEP 15-12CR FAST RECOVERY DIODE, REPETITIVE PEAK REVERSE VOLTAGE 1200V, FORWARD AVERAGE CURRENT 15A, TO-220AC PACKAGE	4			Bidder to provide details & comply
1.40	MUR1620 ULTRA FAST RECTIFIER DIODE, REPETITIVE PEAK REVERSE VOLTAGE 200V DC, AVERAGE FORWARD CURRENT 8 A, TO 220 PACKAGE.	5			Bidder to provide details & comply
1.41	SS14 RECTIFIER DIODE, REPETITIVE PEAK REVERSE VOLTAGE 40V, FORWARD AVERAGE CURRENT 1A, DO-214AC PACKAGE	2			Bidder to provide details & comply
1.42	SS16 RECTIFIER DIODE, REPETITIVE PEAK REVERSE VOLTAGE 60V, FORWARD AVERAGE CURRENT 1A, DO-214AC PACKAGE	25			Bidder to provide details & comply

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1.43	BZX 55C16 ZENER DIODE, ZENER VOLTAGE 16V, REVERSE LEAKAGE CURRENT AT 25 DEGREE CELCIUS LESS THAN 0.1 mA, 0.5W, DO-35 PACKAGE	16		Bidder to provide details & comply
1.44	CARBON FILM RESISTANCE 3.3 OHM 0.5 W	6		Bidder to provide details & comply
1.45	THICK/THIN FILM CHIP RESISTANCE 5.6 OHM, LENGTH X WIDTH 3.05MM X 1.6MM(1206)	14		Bidder to provide details & comply
1.46	THICK/THIN FILM CHIP RESISTANCE 10 OHM, LENGTH X WIDTH 1MM X 0.5MM(0402)	25		Bidder to provide details & comply
1.47	THICK/THICK/THIN FILM CHIP RESISTANCE 24 OHM, LENGTH X WIDTH 4.5MM X 3.1MM(1812)	31		Bidder to provide details & comply
1.48	CARBON FILM RESISTANCE 27 OHM 0.25W	7		Bidder to provide details & comply
1.49	THICK/THIN FILM CHIP RESISTANCE 33 OHM, LENGTH X WIDTH 4.5MM X 3.1MM(1812)	25		Bidder to provide details & comply
1.50	CARBON FILM RESISTANCE 50 OHM 0.25W	4		Bidder to provide details & comply
1.51	THICK/THIN FILM CHIP RESISTANCE 100 OHM, LENGTH X WIDTH 1MM X 0.5MM(0402)	35		Bidder to provide details & comply
1.52	CARBON FILM RESISTANCE 220 OHM 0.25W	2		Bidder to provide details & comply
1.53	CARBON FILM RESISTANCE 330 OHM 0.25W	2		Bidder to provide details & comply
1.54	THICK/THIN FILM CHIP RESISTANCE 470 OHM, LENGTH X WIDTH 1MM X 0.5MM(0402)	18		Bidder to provide details & comply
1.55	THICK/THIN FILM CHIP RESISTANCE 620 OHM, LENGTH X WIDTH 6.3MM X 3.2MM(2512)	24		Bidder to provide details & comply
1.56	THICK/THIN FILM CHIP RESISTANCE 1 KOHM, LENGTH X WIDTH 2MM X 1.25MM(0805)	17		Bidder to provide details & comply
1.57	THICK/THIN FILM CHIP RESISTANCE 1.2 KOHM, LENGTH X WIDTH 4.5MM X 3.1MM(1812)	33		Bidder to provide details & comply
1.58	CARBON FILM RESISTANCE 1.6 KOHM 0.25W	4		Bidder to provide details & comply
1.59	THICK/THIN FILM CHIP RESISTANCE 2.2KOHM, LENGTH X WIDTH 2MM X 1.25MM(0805)	34		Bidder to provide details & comply
1.60	CARBON FILM RESISTANCE 3.3 KOHM 0.25W	2		Bidder to provide details & comply
1.61	THICK/THIN FILM CHIP RESISTANCE 4.7 KOHM, LENGTH X WIDTH 2MM X 1.25MM(0805)	8		Bidder to provide details & comply
1.62	CARBON FILM RESISTANCE 5 KOHM 0.25W	8		Bidder to provide details & comply
1.63	THICK/THIN FILM CHIP RESISTANCE 5.6 KOHM, LENGTH X WIDTH 2MM X 1.25MM(0805)	8		Bidder to provide details & comply
1.64	THICK/THIN FILM CHIP RESISTANCE 6.8 KOHM, LENGTH X WIDTH 1MM X 0.5MM(0402)	20		Bidder to provide details & comply
1.65	THICK/THIN FILM CHIP RESISTANCE 7.5 KOHM, LENGTH X WIDTH 2MM X 1.25MM(0805)	31		Bidder to provide details & comply
1.66	THICK/THIN FILM CHIP RESISTANCE 10 KOHM, LENGTH X WIDTH 1MM X 0.5MM(0402)	14		Bidder to provide details & comply
1.67	CARBON FILM RESISTANCE 13KOHM 0.25W	5		Bidder to provide details & comply
1.68	CARBON FILM RESISTANCE 16KOHM 0.25W	4		Bidder to provide details & comply
1.69	CARBON FILM RESISTANCE 33 KOHM 0.25W	8		Bidder to provide details & comply
1.70	CARBON FILM RESISTANCE 42 KOHM 0.25W	9		Bidder to provide details & comply
1.71	THICK/THIN FILM CHIP RESISTANCE 47 KOHM, LENGTH X WIDTH 2MM X 1.25MM(0805)	6		Bidder to provide details & comply

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1.72	THICK/THIN FILM CHIP RESISTANCE 56 KOHM, LENGTH X WIDTH 6.3MM X 3.2MM(2512)	16			Bidder to provide details & comply
1.73	THICK/THIN FILM CHIP RESISTANCE 100 KOHM, LENGTH X WIDTH 1MM X 0.5MM(0402)	15			Bidder to provide details & comply
1.74	THICK/THIN FILM CHIP RESISTANCE 150 KOHM, LENGTH X WIDTH 6.3MM X 3.2MM(2512)	14			Bidder to provide details & comply
1.75	THICK/THIN FILM CHIP RESISTANCE 180 KOHM, LENGTH X WIDTH 6.3MM X 3.2MM(2512)	19			Bidder to provide details & comply
1.76	THICK/THIN FILM CHIP RESISTANCE 220 KOHM, LENGTH X WIDTH 6.3MM X 3.2MM(2512)	15			Bidder to provide details & comply
1.77	THICK/THIN FILM CHIP RESISTANCE 470 KOHM, LENGTH X WIDTH 1MM X 0.5MM(0402)	19			Bidder to provide details & comply
1.78	SURFACE MOUNT TANTALUM CAPACITOR, CAPACITANCE 1.5 $\mu$ F, RATE VOLTAGE 25 V, SIZE :LENGTH X WIDTH[3.5 $\pm$ 0.20]X[2.8 $\pm$ 0.20]MM	2			Bidder to provide details & comply
1.79	SURFACE MOUNT TANTALUM CAPACITOR, CAPACITANCE 4.7 $\mu$ F, RATED VOLTAGE 25 V, SIZE :LENGTH X WIDTH [3.5 $\pm$ 0.20]X[2.8 $\pm$ 0.20]MM	12			Bidder to provide details & comply
1.80	SURFACE MOUNT TANTALUM CAPACITOR, CAPACITANCE 10 $\mu$ F, RATED VOLTAGE 35 V, SIZE : LENGTH X WIDTH [7.3 $\pm$ 0.30]X[4.3 $\pm$ 0.30]	14			Bidder to provide details & comply
1.81	RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITORS, CAPACITANCE 10 MICRO FARAD, RATED VOLTAGE 400V, CASE SIZE : (DIA. X HEIGHT) 10MM X 20MM.	14			Bidder to provide details & comply
1.82	MULTILAYER CERAMIC CHIP CAPACITORS, CAPACITANCE 15 MICRO FARAD, RATE VOLTAGE 50V. SIZE :LENGTH X WIDTH [5.7 $\pm$ 0.40]X[5.0 $\pm$ 0.40]	28			Bidder to provide details & comply
1.83	SOLID TANTALUM SURFACE MOUNT CHIP CAPACITOR, CAPACITANCE 22 MICRO FARAD, RATE VOLTAGE 25V, SIZE : LENGTH X WIDTH [7.3 $\pm$ 0.30] X [4.3 $\pm$ 0.30] MM.	20			Bidder to provide details & comply
1.84	RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 22 MICRO FARAD, RATE VOLTAGE 50V, CASE SIZE : (DIA. X HEIGHT) 5MM X 11MM.	18			Bidder to provide details & comply
1.85	RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 47 MICRO FARAD, RATE VOLTAGE 25V. SIZE : (DIA. X HEIGHT) 5MM X 11MM	27			Bidder to provide details & comply
1.86	ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 100 MICRO FARAD, RATE VOLTAGE 35V. SIZE : (LENGTHXWIDTH) 8.00 $\pm$ 0.50 8.00 $\pm$ 0.50 MM.	21			Bidder to provide details & comply
1.87	RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 120 MICRO FARAD, RATE VOLTAGE 25V. CASE SIZE : (DIA. X HEIGHT) 6.3MM X 15MM	6			Bidder to provide details & comply
1.88	RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 120 MICRO FARAD, RATE VOLTAGE 35V. CASE SIZE : (DIA. X HEIGHT) 8MM X 12MM.	6			Bidder to provide details & comply
1.89	RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 150 MICROFARAD, RATE VOLTAGE 35V. CASE SIZE : (DIA. X HEIGHT) 8MMx11.5MM.	4			Bidder to provide details & comply
1.90	RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 220 MICROFARAD, RATE VOLTAGE 25V, CASE SIZE : (DIA. X HEIGHT) 8MMx11.5MM	7			Bidder to provide details & comply
1.91	RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 220 MICRO FARAD, RATED VOLTAGE 35V. CASE SIZE : (DIA. X HEIGHT) 10MMx12.5MM	18			Bidder to provide details & comply

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1.92	RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 330 MICRO FARAD, RATED VOLTAGE 35V. CASE SIZE : (DIA. X HEIGHT) 10MMx16MM	8			Bidder to provide details & comply
1.93	ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 330 MICROFARAD, RATED VOLTAGE 400V, CASE SIZE : (DIA. X HEIGHT) 35MMx50MM	49			Bidder to provide details & comply
1.94	RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 470 MICROFARAD, RATED VOLTAGE 16V. CASE SIZE : (DIA. X HEIGHT) 10MMx12.5MM	13			Bidder to provide details & comply
1.95	RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 470 MICROFARAD, RATED VOLTAGE 35V. CASE SIZE : (DIA. X HEIGHT) 10MMx20MM	1			Bidder to provide details & comply
1.96	ALUMINUM ELECTROLYTIC CAPACITOR, CAPACITANCE 470 MICROFARAD, RATED VOLTAGE 400V. CASE SIZE : (DIA. X HEIGHT) 40MMx50MM	6			Bidder to provide details & comply
1.97	RADIAL LEAD ALUMINIUM ELECTROLYTIC CAPACITOR, CAPACITANCE 1500 MICROFARAD, RATED VOLTAGE 25V. CASE SIZE : (DIA. X HEIGHT) 12.5MMx25MM.	14			Bidder to provide details & comply
1.98	CYLINDRICAL FUSE, RATED CURRENT 4A, RATED VOLTAGE 500V AC, DIA x LENGTH 10MMx38MM ±0.5MM	21			Bidder to provide details & comply
1.99	DC BRUSHLESS FAN (SLEEVE/BALL BEARING), SUPPLY: 24V DC, 1WATT OR MORE SIZE: 60X60X25 MM.	12			Bidder to provide details & comply
<b>2 WARRANTY:</b>					
2.1	Party shall stand warranty for a period of 6 months from date of reception of material at HEEP, BHEL Haridwar.				Bidder to comply
<b>3 SPECIAL TERMS &amp; CONDITIONS</b>					
3.1	Vendor must quote all the above items against clause nos. 1.1 to 1.99 with their exact quantities. In case any of the item is not quoted by the vendor, this will lead to disqualification of whole offer.				Bidder to comply
<b>4 GENERAL CONDITIONS:</b>					
4.1	A point wise compliance statement shall be submitted by the party with reference to the above scope of supply against each clause/sub-clause with relevant details & comments. Non-compliance to any of the above clauses & quoting inadequate quantities can lead to disqualification of the offer.				Information to bidder

  
 23.05.2022  
 (Satbir Singh)  
 Engineer (Hex / CMC-Lab)