

Junus Panel Amp Model JSP-090-10 MTBF				
PCB Assembly P/N 02-00955-000				
MTBF CALCULATION PER MIL-HDBK-217F PARTS COUNT RELIABILITY PREDICTION METHOD				
ITEM	QUANTITY	FAILURE RATE PER 10⁶ HOURS	QUALITY FACTOR	TOTAL FAILURE RATE PER 10⁶ HOURS
CAPACITOR, ELECTROLYTIC	9	0.02400	3.0	0.6480
CAPACITOR, CERAMIC	50	0.00360	3.0	0.5400
CAPACITOR, PLASTIC FILM	3	0.00230	3.0	0.0207
CONNECTOR	2	0.00540	2.0	0.0216
DIODE, GENERAL PURPOSE	12	0.00360	5.5	0.2376
DIODE, LIGHT EMITTING	2	0.00047	8.0	0.0075
DIODE, SCHOTTKY	1	0.04700	2.5	0.1175
FET, SILICON	6	0.01400	8.0	0.6720
IC, BIPOLAR LINEAR	12	0.00950	2.0	0.2280
IC, REGULATOR	2	0.00950	8.0	0.1520
INDUCTOR	1	0.00170	4.0	0.0068
OSCILLATOR, CRYSTAL	1	0.03200	2.1	0.0672
PROM, EE	1	0.01000	2.0	0.0200
RECTIFIER, POWER	1	0.00280	8.0	0.0224
RESISTOR NETWORK, FILM	9	0.00230	3.0	0.0621
RESISTOR, METAL FILM	43	0.00120	3.0	0.1548
RESISTOR, WW POWER	2	0.01400	3.0	0.0840
SOLDERED CONNECTIONS	330	0.00007	1.0	0.0231
THERMISTOR	1	0.06500	3.0	0.1950
TRANSFORMER	1	0.02300	3.0	0.0690
TRANSISTOR	6	0.00015	5.5	0.0050
			TOTAL	3.3543
			MTBF (HOURS)	298127
			MTBF (YEARS)	34.03

Junus Panel Amp Model JSP-090-20 MTBF

PCB Assembly P/N 02-00942-000

MTBF CALCULATION PER MIL-HDBK-217F PARTS COUNT RELIABILITY PREDICTION METHOD

ITEM	QUANTITY	FAILURE RATE PER 10⁶ HOURS	QUALITY FACTOR	TOTAL FAILURE RATE PER 10⁶ HOURS
CAPACITOR, ELECTROLYTIC	9	0.02400	3.0	0.6480
CAPACITOR, CERAMIC	50	0.00360	3.0	0.5400
CAPACITOR, PLASTIC FILM	3	0.00230	3.0	0.0207
CONNECTOR	2	0.00540	2.0	0.0216
DIODE, GENERAL PURPOSE	12	0.00360	5.5	0.2376
DIODE, LIGHT EMITTING	2	0.00047	8.0	0.0075
DIODE, SCHOTTKY	1	0.04700	2.5	0.1175
FET, SILICON	6	0.01400	8.0	0.6720
IC, BIPOLAR LINEAR	12	0.00950	2.0	0.2280
IC, REGULATOR	2	0.00950	8.0	0.1520
INDUCTOR	1	0.00170	4.0	0.0068
OSCILLATOR, CRYSTAL	1	0.03200	2.1	0.0672
PROM, EE	1	0.01000	2.0	0.0200
RECTIFIER, POWER	1	0.00280	8.0	0.0224
RESISTOR NETWORK, FILM	9	0.00230	3.0	0.0621
RESISTOR, METAL FILM	44	0.00120	3.0	0.1584
RESISTOR, WW POWER	1	0.01400	3.0	0.0420
SOLDERED CONNECTIONS	330	0.00007	1.0	0.0231
THERMISTOR	1	0.06500	3.0	0.1950
TRANSFORMER	1	0.02300	3.0	0.0690
TRANSISTOR	6	0.00015	5.5	0.0050
			TOTAL	3.3159
			MTBF (HOURS)	301580
			MTBF (YEARS)	34.43

Junus Panel Amp Model JSP-180-10 MTBF

PCB Assembly P/N 02-00955-000

MTBF CALCULATION PER MIL-HDBK-217F PARTS COUNT RELIABILITY PREDICTION METHOD

ITEM	QUANTITY	FAILURE RATE PER 10⁶ HOURS	QUALITY FACTOR	TOTAL FAILURE RATE PER 10⁶ HOURS
CAPACITOR, ELECTROLYTIC	9	0.00012	3.0	0.0032
CAPACITOR, CERAMIC	50	0.00099	3.0	0.1485
CAPACITOR, PLASTIC FILM	3	0.00230	3.0	0.0207
CONNECTOR	2	0.00540	2.0	0.0216
DIODE, GENERAL PURPOSE	12	0.00360	5.5	0.2376
DIODE, LIGHT EMITTING	2	0.00047	8.0	0.0075
DIODE, SCHOTTKY	1	0.00300	2.5	0.0075
FET, SILICON	6	0.01400	8.0	0.6720
IC, BIPOLAR LINEAR	12	0.00950	2.0	0.2280
IC, REGULATOR	2	0.00950	8.0	0.1520
INDUCTOR	1	0.00170	4.0	0.0068
OSCILLATOR, CRYSTAL	1	0.03200	2.1	0.0672
PROM, EE	1	0.01000	2.0	0.0200
RECTIFIER, POWER	1	0.00280	8.0	0.0224
RESISTOR NETWORK, FILM	9	0.00230	3.0	0.0621
RESISTOR, METAL FILM	43	0.00120	3.0	0.1548
RESISTOR, WW POWER	2	0.01400	3.0	0.0840
SOLDERED CONNECTIONS	330	0.00007	1.0	0.0231
THERMISTOR	1	0.06500	3.0	0.1950
TRANSFORMER	1	0.02300	3.0	0.0690
TRANSISTOR	6	0.00015	5.5	0.0050
			TOTAL	2.2080
			MTBF (HOURS)	452896
			MTBF (YEARS)	51.70

Junus Panel Amp Model JSP-180-20 MTBF

PCB Assembly P/N 02-00942-000

MTBF CALCULATION PER MIL-HDBK-217F PARTS COUNT RELIABILITY PREDICTION METHOD

ITEM	QUANTITY	FAILURE RATE PER 10⁶ HOURS	QUALITY FACTOR	TOTAL FAILURE RATE PER 10⁶ HOURS
CAPACITOR, ELECTROLYTIC	9	0.00012	3.0	0.0032
CAPACITOR, CERAMIC	50	0.00099	3.0	0.1485
CAPACITOR, PLASTIC FILM	3	0.00230	3.0	0.0207
CONNECTOR	2	0.00540	2.0	0.0216
DIODE, GENERAL PURPOSE	12	0.00360	5.5	0.2376
DIODE, LIGHT EMITTING	2	0.00047	8.0	0.0075
DIODE, SCHOTTKY	1	0.00300	2.5	0.0075
FET, SILICON	6	0.01400	8.0	0.6720
IC, BIPOLAR LINEAR	12	0.00950	2.0	0.2280
IC, REGULATOR	2	0.00950	8.0	0.1520
INDUCTOR	1	0.00170	4.0	0.0068
OSCILLATOR, CRYSTAL	1	0.03200	2.1	0.0672
PROM, EE	1	0.01000	2.0	0.0200
RECTIFIER, POWER	1	0.00280	8.0	0.0224
RESISTOR NETWORK, FILM	9	0.00230	3.0	0.0621
RESISTOR, METAL FILM	44	0.00120	3.0	0.1584
RESISTOR, WW POWER	1	0.01400	3.0	0.0420
SOLDERED CONNECTIONS	330	0.00007	1.0	0.0231
THERMISTOR	1	0.06500	3.0	0.1950
TRANSFORMER	1	0.02300	3.0	0.0690
TRANSISTOR	6	0.00015	5.5	0.0050
			TOTAL	2.1696
			MTBF (HOURS)	460912
			MTBF (YEARS)	52.62

MODEL JSP-180-30 ROHS MTBF				
P/N 00-00940-000				
MTBF CALCULATION PER MIL-HDBK-217F PARTS COUNT RELIABILITY PREDICTION METHOD				
ITEM	QUANTITY	FAILURE RATE PER 10⁶ HOURS	QUALITY FACTOR	TOTAL FAILURE RATE PER 10⁶ HOURS
CAPACITOR, ALUMINUM OXIDE ELECT	9	0.00012	3.0	0.0032
CAPACITOR, CERAMIC	50	0.00099	3.0	0.1485
CAPACITOR, METALLIZED FILM	3	0.00290	3.0	0.0261
CONNECTOR	2	0.00540	2.0	0.0216
DIODE, LIGHT EMITTING	2	0.00047	8.0	0.0075
DIODE, SCHOTTKY	1	0.00300	2.4	0.0072
DIODE, SWITCHING	10	0.00094	5.5	0.0517
DIODE, ZENER	1	0.00330	5.5	0.0182
FET, SILICON	6	0.01400	8.0	0.6720
IC, DIGITAL CMOS	12	0.00570	3.1	0.2120
IC, REGULATOR	2	0.00950	8.0	0.1520
INDUCTORS	1	0.00170	4.0	0.0068
OSCILLATOR, CRYSTAL	1	0.03200	2.1	0.0672
PROM, EE	2	0.01000	2.0	0.0400
RECTIFIER, POWER	1	0.00280	8.0	0.0224
RESISTOR NETWORK, FILM	9	0.00230	3.0	0.0621
RESISTOR, METAL FILM	45	0.00120	3.0	0.1620
RESISTOR, WW POWER	1	0.01400	3.0	0.0420
SOLDERED CONNECTIONS	326	0.00007	1.0	0.0225
THERMISTOR	1	0.06500	3.0	0.1950
TRANSFORMER, FLYBACK	1	0.02300	3.0	0.0690
TRANSISTORS, BIPOLAR	2	0.00015	5.5	0.0017
			TOTAL	2.0107
			MTBF (HOURS)	497341
			MTBF (YRS)	56.77