

<b>MODEL R11-230-02 ROHS MTBF</b>				
<b>P/N 00-01007-000</b>				
<b>MTBF CALCULATION PER MIL-HDBK-217F PARTS COUNT RELIABILITY PREDICTION METHOD</b>				
<b>ITEM</b>	<b>QUANTITY</b>	<b>FAILURE RATE PER 10<sup>6</sup> HOURS</b>	<b>QUALITY FACTOR</b>	<b>TOTAL FAILURE RATE PER 10<sup>6</sup> HOURS</b>
CAPACITOR, ALUMINUM OXIDE ELECT	8	0.00012	3.0	0.0029
CAPACITOR, CERAMIC	125	0.00099	3.0	0.3713
CONNECTOR	1	0.00540	2.0	0.0108
DIODE, LIGHT EMITTING	2	0.00047	8.0	0.0075
DIODE, SCHOTTKY	7	0.00300	2.4	0.0504
DIODE, SWITCHING	4	0.00094	5.5	0.0207
DIODE, ZENER	9	0.00330	5.5	0.1634
FET, SILICON	8	0.01400	8.0	0.8960
IC, BIPOLAR LINEAR	3	0.00950	2.0	0.0570
IC, DIGITAL CMOS	45	0.00570	3.1	0.7952
IC, REGULATOR	5	0.00950	8.0	0.3800
IGBT	10	0.01400	8.0	1.1200
INDUCTORS	1	0.00170	4.0	0.0068
OPTOCOUPLER/ISOLATOR	4	0.02700	8.0	0.8640
OSCILLATOR, CRYSTAL	1	0.03200	2.1	0.0672
PCB	3	0.00002	1.0	0.0001
PROM, EE	4	0.01000	2.0	0.0800
RECTIFIER, POWER	12	0.00280	8.0	0.2688
RESISTOR NETWORK, FILM	33	0.00230	3.0	0.2277
RESISTOR, METAL FILM	101	0.00120	3.0	0.3636
RESISTOR, WW POWER	5	0.01400	3.0	0.2100
SOCKET	1	0.00540	2.0	0.0108
SOLDERED CONNECTIONS	800	0.00007	1.0	0.0552
THERMISTOR	3	0.06500	3.0	0.5850
TRANSFORMER, FLYBACK	1	0.02300	3.0	0.0690
TRANSIENT VOLTAGE SUPPRESSOR	1	0.00290	5.5	0.0160
TRANSISTORS, BIPOLAR	3	0.00015	5.5	0.0025
			<b>TOTAL</b>	<b>6.7016</b>
			<b>MTBF (HOURS)</b>	<b>149218</b>
			<b>MTBF (YRS)</b>	<b>17.03</b>

<b>MODEL R11-230-02-R ROHS MTBF</b>				
<b>P/N 00-01013-000</b>				
<b>MTBF CALCULATION PER MIL-HDBK-217F PARTS COUNT RELIABILITY PREDICTION METHOD</b>				
<b>ITEM</b>	<b>QUANTITY</b>	<b>FAILURE RATE PER 10<sup>6</sup> HOURS</b>	<b>QUALITY FACTOR</b>	<b>TOTAL FAILURE RATE PER 10<sup>6</sup> HOURS</b>
CAPACITOR, ALUMINUM OXIDE ELECT	8	0.00012	3.0	0.0029
CAPACITOR, CERAMIC	137	0.00099	3.0	0.4069
CONNECTOR	1	0.00540	2.0	0.0108
DIODE, LIGHT EMITTING	2	0.00047	8.0	0.0075
DIODE, SCHOTTKY	9	0.00300	2.4	0.0648
DIODE, SWITCHING	4	0.00094	5.5	0.0207
DIODE, ZENER	9	0.00330	5.5	0.1634
FET, SILICON	8	0.01400	8.0	0.8960
IC, BIPOLAR LINEAR	4	0.00950	2.0	0.0760
IC, DIGITAL CMOS	55	0.00570	3.1	0.9719
IC, REGULATOR	5	0.00950	8.0	0.3800
IGBT	6	0.01400	8.0	0.6720
INDUCTORS	1	0.00170	4.0	0.0068
OPTOCOUPLER/ISOLATOR	8	0.02700	8.0	1.7280
OSCILLATOR, CRYSTAL	1	0.03200	2.1	0.0672
PCB	3	0.00002	1.0	0.0001
PROM, EE	4	0.01000	2.0	0.0800
RECTIFIER, POWER	12	0.00280	8.0	0.2688
RESISTOR NETWORK, FILM	32	0.00230	3.0	0.2208
RESISTOR, METAL FILM	102	0.00120	3.0	0.3672
RESISTOR, WW POWER	5	0.01400	3.0	0.2100
SOCKET	1	0.00540	2.0	0.0108
SOLDERED CONNECTIONS	852	0.00007	1.0	0.0588
THERMISTOR	3	0.06500	3.0	0.5850
TRANSFORMER, FLYBACK	1	0.02300	3.0	0.0690
TRANSIENT VOLTAGE SUPPRESSOR	2	0.00290	5.5	0.0319
TRANSISTORS, BIPOLAR	3	0.00015	5.5	0.0025
			<b>TOTAL</b>	<b>7.3796</b>
			<b>MTBF (HOURS)</b>	<b>135509</b>
			<b>MTBF (YRS)</b>	<b>15.47</b>

<b>MODEL R11-230-02-S ROHS MTBF</b>				
<b>P/N 00-01010-000</b>				
<b>MTBF CALCULATION PER MIL-HDBK-217F PARTS COUNT RELIABILITY PREDICTION METHOD</b>				
<b>ITEM</b>	<b>QUANTITY</b>	<b>FAILURE RATE PER 10<sup>6</sup> HOURS</b>	<b>QUALITY FACTOR</b>	<b>TOTAL FAILURE RATE PER 10<sup>6</sup> HOURS</b>
CAPACITOR, ALUMINUM OXIDE ELECT	8	0.00012	3.0	0.0029
CAPACITOR, CERAMIC	125	0.00099	3.0	0.3713
CONNECTOR	1	0.00540	2.0	0.0108
DIODE, LIGHT EMITTING	2	0.00047	8.0	0.0075
DIODE, SCHOTTKY	7	0.00300	2.4	0.0504
DIODE, SWITCHING	4	0.00094	5.5	0.0207
DIODE, ZENER	9	0.00330	5.5	0.1634
FET, SILICON	8	0.01400	8.0	0.8960
IC, BIPOLAR LINEAR	3	0.00950	2.0	0.0570
IC, DIGITAL CMOS	45	0.00570	3.1	0.7952
IC, REGULATOR	5	0.00950	8.0	0.3800
IGBT	10	0.01400	8.0	1.1200
INDUCTORS	1	0.00170	4.0	0.0068
OPTOCOUPLER/ISOLATOR	4	0.02700	8.0	0.8640
OSCILLATOR, CRYSTAL	1	0.03200	2.1	0.0672
PCB	3	0.00002	1.0	0.0001
PROM, EE	4	0.01000	2.0	0.0800
RECTIFIER, POWER	12	0.00280	8.0	0.2688
RESISTOR NETWORK, FILM	33	0.00230	3.0	0.2277
RESISTOR, METAL FILM	101	0.00120	3.0	0.3636
RESISTOR, WW POWER	5	0.01400	3.0	0.2100
SOCKET	1	0.00540	2.0	0.0108
SOLDERED CONNECTIONS	800	0.00007	1.0	0.0552
THERMISTOR	3	0.06500	3.0	0.5850
TRANSFORMER, FLYBACK	1	0.02300	3.0	0.0690
TRANSIENT VOLTAGE SUPPRESSOR	1	0.00290	5.5	0.0160
TRANSISTORS, BIPOLAR	3	0.00015	5.5	0.0025
			<b>TOTAL</b>	<b>6.7016</b>
			<b>MTBF (HOURS)</b>	<b>149218</b>
			<b>MTBF (YRS)</b>	<b>17.03</b>

<b>MODEL R11-230-06 ROHS MTBF</b>				
<b>P/N 00-01008-000</b>				
<b>MTBF CALCULATION PER MIL-HDBK-217F PARTS COUNT RELIABILITY PREDICTION METHOD</b>				
<b>ITEM</b>	<b>QUANTITY</b>	<b>FAILURE RATE PER 10<sup>6</sup> HOURS</b>	<b>QUALITY FACTOR</b>	<b>TOTAL FAILURE RATE PER 10<sup>6</sup> HOURS</b>
CAPACITOR, ALUMINUM OXIDE ELECT	8	0.00012	3.0	0.0029
CAPACITOR, CERAMIC	125	0.00099	3.0	0.3713
CONNECTOR	1	0.00540	2.0	0.0108
DIODE, LIGHT EMITTING	2	0.00047	8.0	0.0075
DIODE, SCHOTTKY	7	0.00300	2.4	0.0504
DIODE, SWITCHING	4	0.00094	5.5	0.0207
DIODE, ZENER	9	0.00330	5.5	0.1634
FET, SILICON	8	0.01400	8.0	0.8960
IC, BIPOLAR LINEAR	3	0.00950	2.0	0.0570
IC, DIGITAL CMOS	45	0.00570	3.1	0.7952
IC, REGULATOR	5	0.00950	8.0	0.3800
IGBT	10	0.01400	8.0	1.1200
INDUCTORS	1	0.00170	4.0	0.0068
OPTOCOUPLER/ISOLATOR	4	0.02700	8.0	0.8640
OSCILLATOR, CRYSTAL	1	0.03200	2.1	0.0672
PCB	3	0.00002	1.0	0.0001
PROM, EE	4	0.01000	2.0	0.0800
RECTIFIER, POWER	12	0.00280	8.0	0.2688
RESISTOR NETWORK, FILM	33	0.00230	3.0	0.2277
RESISTOR, METAL FILM	101	0.00120	3.0	0.3636
RESISTOR, WW POWER	5	0.01400	3.0	0.2100
SOCKET	1	0.00540	2.0	0.0108
SOLDERED CONNECTIONS	800	0.00007	1.0	0.0552
THERMISTOR	3	0.06500	3.0	0.5850
TRANSFORMER, FLYBACK	1	0.02300	3.0	0.0690
TRANSIENT VOLTAGE SUPPRESSOR	1	0.00290	5.5	0.0160
TRANSISTORS, BIPOLAR	3	0.00015	5.5	0.0025
			<b>TOTAL</b>	<b>6.7016</b>
			<b>MTBF (HOURS)</b>	<b>149218</b>
			<b>MTBF (YRS)</b>	<b>17.03</b>

**MODEL R11-230-06-R ROHS MTBF**

**P/N 00-01014-000**

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

<b>ITEM</b>	<b>QUANTITY</b>	<b>FAILURE RATE PER 10<sup>6</sup> HOURS</b>	<b>QUALITY FACTOR</b>	<b>TOTAL FAILURE RATE PER 10<sup>6</sup> HOURS</b>
CAPACITOR, ALUMINUM OXIDE ELECT	8	0.00012	3.0	0.0029
CAPACITOR, CERAMIC	137	0.00099	3.0	0.4069
CONNECTOR	1	0.00540	2.0	0.0108
DIODE, LIGHT EMITTING	2	0.00047	8.0	0.0075
DIODE, SCHOTTKY	9	0.00300	2.4	0.0648
DIODE, SWITCHING	4	0.00094	5.5	0.0207
DIODE, ZENER	9	0.00330	5.5	0.1634
FET, SILICON	8	0.01400	8.0	0.8960
IC, BIPOLAR LINEAR	4	0.00950	2.0	0.0760
IC, DIGITAL CMOS	55	0.00570	3.1	0.9719
IC, REGULATOR	5	0.00950	8.0	0.3800
IGBT	6	0.01400	8.0	0.6720
INDUCTORS	1	0.00170	4.0	0.0068
OPTOCOUPLER/ISOLATOR	8	0.02700	8.0	1.7280
OSCILLATOR, CRYSTAL	1	0.03200	2.1	0.0672
PCB	3	0.00002	1.0	0.0001
PROM, EE	4	0.01000	2.0	0.0800
RECTIFIER, POWER	12	0.00280	8.0	0.2688
RESISTOR NETWORK, FILM	32	0.00230	3.0	0.2208
RESISTOR, METAL FILM	102	0.00120	3.0	0.3672
RESISTOR, WW POWER	5	0.01400	3.0	0.2100
SOCKET	1	0.00540	2.0	0.0108
SOLDERED CONNECTIONS	852	0.00007	1.0	0.0588
THERMISTOR	3	0.06500	3.0	0.5850
TRANSFORMER, FLYBACK	1	0.02300	3.0	0.0690
TRANSIENT VOLTAGE SUPPRESSOR	2	0.00290	5.5	0.0319
TRANSISTORS, BIPOLAR	3	0.00015	5.5	0.0025
			<b>TOTAL</b>	<b>7.3796</b>
			<b>MTBF (HOURS)</b>	<b>135509</b>
			<b>MTBF (YRS)</b>	<b>15.47</b>

**MODEL R11-230-06-S ROHS MTBF**

**P/N 00-01011-000**

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

<b>ITEM</b>	<b>QUANTITY</b>	<b>FAILURE RATE PER 10<sup>6</sup> HOURS</b>	<b>QUALITY FACTOR</b>	<b>TOTAL FAILURE RATE PER 10<sup>6</sup> HOURS</b>
CAPACITOR, ALUMINUM OXIDE ELECT	8	0.00012	3.0	0.0029
CAPACITOR, CERAMIC	125	0.00099	3.0	0.3713
CONNECTOR	1	0.00540	2.0	0.0108
DIODE, LIGHT EMITTING	2	0.00047	8.0	0.0075
DIODE, SCHOTTKY	7	0.00300	2.4	0.0504
DIODE, SWITCHING	4	0.00094	5.5	0.0207
DIODE, ZENER	9	0.00330	5.5	0.1634
FET, SILICON	8	0.01400	8.0	0.8960
IC, BIPOLAR LINEAR	3	0.00950	2.0	0.0570
IC, DIGITAL CMOS	45	0.00570	3.1	0.7952
IC, REGULATOR	5	0.00950	8.0	0.3800
IGBT	10	0.01400	8.0	1.1200
INDUCTORS	1	0.00170	4.0	0.0068
OPTOCOUPLER/ISOLATOR	4	0.02700	8.0	0.8640
OSCILLATOR, CRYSTAL	1	0.03200	2.1	0.0672
PCB	3	0.00002	1.0	0.0001
PROM, EE	4	0.01000	2.0	0.0800
RECTIFIER, POWER	12	0.00280	8.0	0.2688
RESISTOR NETWORK, FILM	33	0.00230	3.0	0.2277
RESISTOR, METAL FILM	101	0.00120	3.0	0.3636
RESISTOR, WW POWER	5	0.01400	3.0	0.2100
SOCKET	1	0.00540	2.0	0.0108
SOLDERED CONNECTIONS	800	0.00007	1.0	0.0552
THERMISTOR	3	0.06500	3.0	0.5850
TRANSFORMER, FLYBACK	1	0.02300	3.0	0.0690
TRANSIENT VOLTAGE SUPPRESSOR	1	0.00290	5.5	0.0160
TRANSISTORS, BIPOLAR	3	0.00015	5.5	0.0025
			<b>TOTAL</b>	<b>6.7016</b>
			<b>MTBF (HOURS)</b>	<b>149218</b>
			<b>MTBF (YRS)</b>	<b>17.03</b>

<b>MODEL R11-230-10 ROHS MTBF</b>				
<b>P/N 00-01009-000</b>				
<b>MTBF CALCULATION PER MIL-HDBK-217F PARTS COUNT RELIABILITY PREDICTION METHOD</b>				
<b>ITEM</b>	<b>QUANTITY</b>	<b>FAILURE RATE PER 10<sup>6</sup> HOURS</b>	<b>QUALITY FACTOR</b>	<b>TOTAL FAILURE RATE PER 10<sup>6</sup> HOURS</b>
CAPACITOR, ALUMINUM OXIDE ELECT	8	0.00012	3.0	0.0029
CAPACITOR, CERAMIC	125	0.00099	3.0	0.3713
CONNECTOR	1	0.00540	2.0	0.0108
DIODE, LIGHT EMITTING	2	0.00047	8.0	0.0075
DIODE, SCHOTTKY	7	0.00300	2.4	0.0504
DIODE, SWITCHING	4	0.00094	5.5	0.0207
DIODE, ZENER	9	0.00330	5.5	0.1634
FET, SILICON	8	0.01400	8.0	0.8960
IC, BIPOLAR LINEAR	3	0.00950	2.0	0.0570
IC, DIGITAL CMOS	45	0.00570	3.1	0.7952
IC, REGULATOR	5	0.00950	8.0	0.3800
IGBT	10	0.01400	8.0	1.1200
INDUCTORS	1	0.00170	4.0	0.0068
OPTOCOUPLER/ISOLATOR	4	0.02700	8.0	0.8640
OSCILLATOR, CRYSTAL	1	0.03200	2.1	0.0672
PCB	3	0.00002	1.0	0.0001
PROM, EE	4	0.01000	2.0	0.0800
RECTIFIER, POWER	12	0.00280	8.0	0.2688
RESISTOR NETWORK, FILM	33	0.00230	3.0	0.2277
RESISTOR, METAL FILM	101	0.00120	3.0	0.3636
RESISTOR, WW POWER	5	0.01400	3.0	0.2100
SOCKET	1	0.00540	2.0	0.0108
SOLDERED CONNECTIONS	800	0.00007	1.0	0.0552
THERMISTOR	3	0.06500	3.0	0.5850
TRANSFORMER, FLYBACK	1	0.02300	3.0	0.0690
TRANSIENT VOLTAGE SUPPRESSOR	1	0.00290	5.5	0.0160
TRANSISTORS, BIPOLAR	3	0.00015	5.5	0.0025
			<b>TOTAL</b>	<b>6.7016</b>
			<b>MTBF (HOURS)</b>	<b>149218</b>
			<b>MTBF (YRS)</b>	<b>17.03</b>

<b>MODEL R11-230-10-R ROHS MTBF</b>				
<b>P/N 00-01015-000</b>				
<b>MTBF CALCULATION PER MIL-HDBK-217F PARTS COUNT RELIABILITY PREDICTION METHOD</b>				
<b>ITEM</b>	<b>QUANTITY</b>	<b>FAILURE RATE PER 10<sup>6</sup> HOURS</b>	<b>QUALITY FACTOR</b>	<b>TOTAL FAILURE RATE PER 10<sup>6</sup> HOURS</b>
CAPACITOR, ALUMINUM OXIDE ELECT	8	0.00012	3.0	0.0029
CAPACITOR, CERAMIC	137	0.00099	3.0	0.4069
CONNECTOR	1	0.00540	2.0	0.0108
DIODE, LIGHT EMITTING	2	0.00047	8.0	0.0075
DIODE, SCHOTTKY	9	0.00300	2.4	0.0648
DIODE, SWITCHING	4	0.00094	5.5	0.0207
DIODE, ZENER	9	0.00330	5.5	0.1634
FET, SILICON	8	0.01400	8.0	0.8960
IC, BIPOLAR LINEAR	4	0.00950	2.0	0.0760
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IC, REGULATOR	5	0.00950	8.0	0.3800
IGBT	6	0.01400	8.0	0.6720
INDUCTORS	1	0.00170	4.0	0.0068
OPTOCOUPLER/ISOLATOR	8	0.02700	8.0	1.7280
OSCILLATOR, CRYSTAL	1	0.03200	2.1	0.0672
PCB	3	0.00002	1.0	0.0001
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RECTIFIER, POWER	12	0.00280	8.0	0.2688
RESISTOR NETWORK, FILM	32	0.00230	3.0	0.2208
RESISTOR, METAL FILM	102	0.00120	3.0	0.3672
RESISTOR, WW POWER	5	0.01400	3.0	0.2100
SOCKET	1	0.00540	2.0	0.0108
SOLDERED CONNECTIONS	852	0.00007	1.0	0.0588
THERMISTOR	3	0.06500	3.0	0.5850
TRANSFORMER, FLYBACK	1	0.02300	3.0	0.0690
TRANSIENT VOLTAGE SUPPRESSOR	2	0.00290	5.5	0.0319
TRANSISTORS, BIPOLAR	3	0.00015	5.5	0.0025
			<b>TOTAL</b>	<b>7.3796</b>
			<b>MTBF (HOURS)</b>	<b>135509</b>
			<b>MTBF (YRS)</b>	<b>15.47</b>



**MODEL R11-230-10-S ROHS MTBF**

**P/N 00-01012-000**

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

<b>ITEM</b>	<b>QUANTITY</b>	<b>FAILURE RATE PER 10<sup>6</sup> HOURS</b>	<b>QUALITY FACTOR</b>	<b>TOTAL FAILURE RATE PER 10<sup>6</sup> HOURS</b>
CAPACITOR, ALUMINUM OXIDE ELECT	8	0.00012	3.0	0.0029
CAPACITOR, CERAMIC	125	0.00099	3.0	0.3713
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DIODE, SCHOTTKY	7	0.00300	2.4	0.0504
DIODE, SWITCHING	4	0.00094	5.5	0.0207
DIODE, ZENER	9	0.00330	5.5	0.1634
FET, SILICON	8	0.01400	8.0	0.8960
IC, BIPOLAR LINEAR	3	0.00950	2.0	0.0570
IC, DIGITAL CMOS	45	0.00570	3.1	0.7952
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IGBT	10	0.01400	8.0	1.1200
INDUCTORS	1	0.00170	4.0	0.0068
OPTOCOUPLER/ISOLATOR	4	0.02700	8.0	0.8640
OSCILLATOR, CRYSTAL	1	0.03200	2.1	0.0672
PCB	3	0.00002	1.0	0.0001
PROM, EE	4	0.01000	2.0	0.0800
RECTIFIER, POWER	12	0.00280	8.0	0.2688
RESISTOR NETWORK, FILM	33	0.00230	3.0	0.2277
RESISTOR, METAL FILM	101	0.00120	3.0	0.3636
RESISTOR, WW POWER	5	0.01400	3.0	0.2100
SOCKET	1	0.00540	2.0	0.0108
SOLDERED CONNECTIONS	800	0.00007	1.0	0.0552
THERMISTOR	3	0.06500	3.0	0.5850
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TRANSISTORS, BIPOLAR	3	0.00015	5.5	0.0025
			<b>TOTAL</b>	<b>6.7016</b>
			<b>MTBF (HOURS)</b>	<b>149218</b>
			<b>MTBF (YRS)</b>	<b>17.03</b>