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**Table 1. Qualification Summary as of 12/08/1996**

Heading	Leg	Test	Reference	Condition	Status	No. Tested	No. Passed
Mechanical Integrity	D6	Resistance to Solder Heat	IEC 68-2-20A Method 1B	Temperature +350°C, 3.5 sec.	Complete	11	11
	D3	Mechanical Shock	MIL-STD-883D Method 2002	Condition A 500 g. 1.0 ms 5 times/axis	Complete	11	11
	D3	Vibration	MIL-STD-883D Method 2007	Condition A 20 g. 20-2000 Hz. 4 min/cycle 4 cycles/axis	Complete	11	11
	D3	Mechanical Shock	MIL-STD-883D Method 2002	Condition B 1500 g. 0.5 ms 5 times/axis			
	D2	Solderability	MIL-STD-883D Method 2003.7	No Steam Aging	Complete	11	11
	D9	Thermal Shock	MIL-STD-883D Method 1001	-20°C to +80°C 15 cycles	Complete	11	11
Endurance	D2	Cyclic Moisture Resistance	MIL-STD-883D Method 1004	20 cycles	Complete	11	11
	D6	Damp Heat	MIL-STD-202 Method 103	+40°C/95%R.H. 56 days	Complete	11	11
	D4	Temperature Cycling	MIL-STD-883D Method 1010	-40°C to +85°C 1000 cycles	Complete	11	11
	D5	Accelerated Aging High Temperature (Biased)		+85°C 5000 hours	Complete	25	25
	D6	Low Temperature Aging		-40°C 2000 hours	Complete	11	11
Special Tests	D3	Flammability	UL-94-VO		Complete	5	5
	D3	E.S.D.	H.B.M. 500 V		Complete	6	6
	D2	Fiber Pull		1 kg x 3 times	Complete	11	11
	D1	RGA	MIL-STD-883D Method 1018	5000 ppm limit	Complete	4	4

## Appendix A

Post Measurements @ +25°C

### Fiber Pull (1 Kg)

Serial No.	Power at (Ith + 15 mA)		Imon at (Ith + 15 mA)		Pass/Fail
	Initial	Final	Initial	Final	
QB000114	1906.3	1940.7	146.9	149.1	Pass
QB000204	1713.6	1707.6	181.9	183.1	Pass
QB000427	1870.6	1896.0	147.0	148.2	Pass
QB000501	2205.8	2165.3	140.5	139.3	Pass
QB000502	1991.2	1979.7	102.3	102.8	Pass
QB000503	2121.4	2162.9	114.8	117.6	Pass
QB000504	2151.5	2152.3	164.7	164.6	Pass
QB000505	2014.7	1959.9	123.2	123.3	Pass
QB000506	2069.5	2071.7	125.2	126.1	Pass
QB000508	2148.0	2208.4	146.5	147.3	Pass
QB000602	2129.4	2044.5	163.1	158.8	Pass

### Solderability

MIL-STD-883D Method 2003.7

Serial No.	Power at (Ith + 15 mA)		Imon at (Ith + 15 mA)		Pass/Fail
	Initial	Final	Initial	Final	
QB000114	1906.3	1869.0	146.9	145.4	Pass
QB000204	1713.6	1688.6	181.9	181.8	Pass
QB000427	1870.6	1887.7	147.0	150.5	Pass
QB000501	2205.8	2163.2	140.5	141.9	Pass
QB000502	1991.2	1983.3	102.3	104.2	Pass
QB000503	2121.4	2109.0	114.8	115.7	Pass
QB000504	2151.5	2106.9	164.7	165.8	Pass
QB000505	2014.7	1950.3	123.2	123.0	Pass
QB000506	2069.5	2114.3	125.2	126.6	Pass
QB000508	2148.0	2202.5	146.5	147.5	Pass
QB000602	2129.4	2113.9	163.1	165.0	Pass

### Cyclic Moisture Resistance

MIL-STD-883D Method 1004

Serial No.	Power at (Ith + 15 mA)			Imon at (Ith + 15 mA)			Pass/Fail
	Initial	Final		Initial	Final		
		10 cycles	20 cycles		10 cycles	20 cycles	
QB000114	1906.3	1906.1	1931.2	146.9	147.3	148.7	Pass
QB000204	1713.6	1673.2	1673.8	181.9	179.8	180.3	Pass
QB000427	1870.6	1892.4	1883.4	147.0	150.0	150.8	Pass
QB000501	2205.8	2164.8	2141.8	140.5	140.2	137.5	Pass
QB000502	1991.2	1903.1	1940.9	102.3	102.7	104.0	Pass
QB000503	2121.4	2116.2	2154.7	114.8	117.7	119.0	Pass
QB000504	2151.5	2154.6	2103.7	164.7	166.1	168.0	Pass
QB000505	2014.7	1971.9	1970.7	123.2	123.5	123.4	Pass
QB000506	2069.5	2098.9	2094.9	125.2	127.2	128.7	Pass
QB000508	2148.0	2163.8	2145.2	146.5	148.4	148.5	Pass
QB000602	2129.4	2093.4	1869.8	163.1	164.7	165.4	Pass

**Post Measurements @ +25°C****Mechanical Shock**

MIL-STD-883D Method 2002 Condition B - 1500g. 0.5 ms, 5 times per axis

Serial No.	Power at (Ith + 15 mA)		Imon at (Ith + 15 mA)		Pass/Fail
	Initial	Final	Initial	Final	
QB000104	2301.1	2290.0	246.3	247.1	Pass
QB000207	1794.1	1778.0	122.0	122.5	Pass
QB000309	1976.8	2003.9	260.9	259.8	Pass
QB000310	1997.5	1980.9	179.0	179.2	Pass
QB000311	1593.0	1885.2	120.7	118.8	Pass
QB000312	1988.5	1987.1	158.3	159.9	Pass
QB000337	1832.5	1837.5	144.8	143.8	Pass
QB000407	1905.6	1911.2	113.5	113.8	Pass
QB000410	1950.7	1984.1	120.6	122.1	Pass
QB000528	2131.1	2131.5	112.8	114.4	Pass
QB000604	2098.1	2071.9	164.8	165.6	Pass

**Vibration**

MIL-STD-883D Method 2007 Condition A -20g. 20-2000 Hz 4 minutes per cycle 4 times per axis

Serial No.	Power at (Ith + 15 mA)		Imon at (Ith + 15 mA)		Pass/Fail
	Initial	Final	Initial	Final	
QB000104	2301.1	2273.1	246.3	246.9	Pass
QB000207	1794.1	1820.7	122.0	124.2	Pass
QB000309	1976.8	1984.2	260.9	259.0	Pass
QB000310	1997.5	2013.5	179.0	180.9	Pass
QB000311	1593.0	1881.0	120.7	120.9	Pass
QB000312	1988.5	1974.1	158.3	157.5	Pass
QB000337	1832.5	1874.1	144.8	146.7	Pass
QB000407	1905.6	1914.1	113.5	112.5	Pass
QB000410	1950.7	1922.7	120.6	119.4	Pass
QB000528	2131.1	2158.8	112.8	113.0	Pass
QB000604	2098.1	2101.8	164.8	163.9	Pass

**Temperature Cycling**

MIL-STD-883D Method 1010 -40°C to +85°C

Serial No.	Power at (Ith + 15 mA)				Imon at (Ith + 15 mA)				Pass/Fail
	Initial	Final			Initial	Final			
		100 cycles	500 cycles	1000 cycles		100 cycles	500 cycles	1000 cycles	
QB000108	2114.8	2065.6	2165.1	2174.1	218.7	219.0	228.3	230.5	Pass
QB000109	1856.5	1875.8	1900.3	1818.2	235.2	236.1	241.6	230.2	Pass
QB000216	1817.1	1849.4	1884.0	1845.5	147.9	151.5	152.8	148.3	Pass
QB000313	2001.2	1995.3	2040.3	2054.4	180.1	178.3	183.5	183.8	Pass
QB000314	1956.3	1956.5	1934.8	1986.1	156.7	152.1	154.5	157.5	Pass
QB000315	1823.8	1912.9	1930.3	1962.0	223.4	221.1	222.8	226.8	Pass
QB000316	1889.2	1906.9	1868.0	1904.3	149.5	151.0	149.6	149.6	Pass
QB000317	2006.6	1999.8	2026.8	2040.0	179.7	176.1	180.2	182.3	Pass
QB000412	1920.8	1923.1	1907.2	1894.5	112.7	113.1	112.5	111.7	Pass
QB000520	2201.5	2193.8	2196.6	2182.2	142.9	139.0	140.7	140.7	Pass
QB000605	1862.4	1939.3	1937.2	1677.7	218.3	213.1	217.7	220.8	Pass

**Post Measurements @ +25°C**

**Accelerated Aging High Temperature (Biased)**

+85°C, 5000 hours

Serial No.	Power at (Ith + 15 mA)				Imon at (Ith + 15 mA)				Pass/Fail
	Initial	Final			Initial	Final			
		1000 hours	2000 hours	5000 hours		1000 hours	2000 hours	5000 hours	
QB000101	1912.7	1867.6	1875.6	1897.5	237.7	237.8	240.3	236.5	Pass
QB000102	2124.7	2075.3	2074.4	2102.2	235.3	238.8	239.2	239.3	Pass
QB000103	1819.1	1805.4	1827.2	1832.8	222.5	225.7	229.3	226.6	Pass
QB000201	1805.5	1677.7	1795.5	1869.5	117.7	117.5	115.4	116.7	Pass
QB000202	1651.4	1644.4	1702.9	1713.0	164.0	169.2	174.1	171.2	Pass
QB000203	1940.5	1925.5	1907.0	1951.8	131.6	130.4	128.7	128.1	Pass
QB000205	1853.5	1840.7	1792.9	1808.8	145.3	143.5	143.9	145.4	Pass
QB000306	1920.7	1881.6	1912.6	1911.8	197.3	198.9	201.0	198.5	Pass
QB000307	1889.1	1771.4	1885.3	1888.0	151.5	153.1	157.0	153.8	Pass
QB000308	1958.5	1880.3	1991.7	1988.8	162.5	168.0	162.9	164.0	Pass
QB000347	2056.1	2041.1	2012.6	2037.4	302.2	304.4	303.0	302.5	Pass
QB000403	1949.9	1901.2	1909.1	1937.4	134.5	134.6	133.3	134.1	Pass
QB000404	1818.0	1774.2	1811.4	1804.1	127.3	125.1	128.4	126.3	Pass
QB000405	1763.8	1752.1	1737.3	1735.8	163.3	166.5	166.6	162.8	Pass
QB000406	2144.6	2102.0	2057.2	2055.5	191.3	194.0	188.9	189.5	Pass
QB000509	2163.6	2095.9	2061.6	2079.3	132.5	133.9	130.7	131.6	Pass
QB000510	2205.8	2202.6	2197.1	2212.6	138.8	140.2	142.3	138.8	Pass
QB000511	2204.0	2186.2	2184.1	2223.9	153.5	153.0	151.2	150.7	Pass
QB000512	2066.9	2031.8	2015.6	2022.0	146.8	147.7	146.8	146.1	Pass
QB000513	2271.4	2311.3	2292.3	2324.0	115.8	119.6	119.8	115.5	Pass
QB000515	1799.2	1743.6	1755.9	1769.2	118.5	114.8	119.3	116.9	Pass
QB000516	2031.2	1960.4	1947.9	1930.3	126.0	122.4	122.7	119.4	Pass
QB000517	2105.6	2132.1	2091.9	2099.4	136.8	140.4	139.0	138.2	Pass
QB000601	1937.6	1867.2	1794.3	1775.7	145.3	147.0	144.6	146.5	Pass
QB000603	2084.4	2007.3	2092.8	2076.2	185.4	180.5	187.6	184.6	Pass

**Resistance to Solder Heat**

IEC 68-2-20A Method 1B - Temperature +350°C, 3.5 sec.

Serial No.	Power at (Ith + 15 mA)		Imon at (Ith + 15 mA)		Pass/Fail
	Initial	Final	Initial	Final	
QB000111	2425.8	2415.5	177.3	178.4	Pass
QB000210	1755.8	1768.6	155.5	157.9	Pass
QB000318	1997.1	2038.2	191.1	185.5	Pass
QB000319	2022.2	1947.0	156.6	151.1	Pass
QB000320	2071.2	2095.5	200.6	198.6	Pass
QB000321	2197.3	2245.7	140.8	141.6	Pass
QB000413	1672.2	1662.8	133.7	131.5	Pass
QB000414	2005.1	2027.7	140.4	141.4	Pass
QB000521	2108.9	2113.0	95.2	95.5	Pass
QB000522	2196.8	2194.7	158.1	157.0	Pass
QB000606	2206.5	2155.6	183.2	178.7	Pass

**Post Measurements @ +25°C**
**Damp Heat**

MIL-STD-202 Method 103 +40°C/95% R.H. 56 days

Serial No.	Power at (Ith + 15 mA)			Imon at (Ith + 15 mA)			Pass/Fail
	Initial	Final		Initial	Final		
		21 days	56 days		21 days	56 days	
QB000111	2425.8	2423.5	2421.1	177.3	177.8	179.8	Pass
QB000210	1755.8	1742.8	1739.3	155.5	157.2	155.2	Pass
QB000318	1997.1	2020.5	2036.1	191.1	189.8	190.5	Pass
QB000319	2022.2	1936.4	2035.8	156.6	150.1	155.5	Pass
QB000320	2071.2	2065.5	2074.0	200.6	200.6	201.1	Pass
QB000321	2197.3	2246.3	2249.4	140.8	145.1	144.2	Pass
QB000413	1672.2	1677.4	1696.5	133.7	133.9	134.0	Pass
QB000414	2005.1	2026.4	2049.5	140.4	142.4	143.0	Pass
QB000521	2108.9	2142.2	2195.0	95.2	98.6	98.4	Pass
QB000522	2196.8	2191.5	2223.5	158.1	161.1	161.1	Pass
QB000606	2206.5	2155.0	2175.0	183.2	183.4	182.5	Pass

**Low Temperature Aging**

-40°C, 2000 hours

Serial No.	Power at (Ith + 15 mA)				Imon at (Ith + 15 mA)				Pass/Fail
	Initial	Final			Initial	Final			
		500 hours	1000 hours	2000 hours		500 hours	1000 hours	2000 hours	
QB000112	1620.9	1624.7	1630.3	1540.0	118.6	120.3	120.3	122.1	Pass
QB000211	1624.4	1620.1	1605.1	1619.8	123.6	123.3	123.5	0.9	Pass
QB000217	1764.3	1775.0	1798.2	1756.6	171.1	170.9	173.6	170.7	Pass
QB000323	2166.5	2122.3	2157.6	2175.5	191.0	185.2	191.2	192.7	Pass
QB000324	2063.3	2106.0	2066.8	2044.7	243.9	246.2	247.0	241.9	Pass
QB000326	2244.8	2272.4	2250.5	2252.0	157.0	157.2	155.5	155.0	Pass
QB000415	1961.0	1976.7	1984.0	2020.3	99.7	99.3	101.0	101.2	Pass
QB000416	1721.6	1734.7	1733.1	1727.6	156.6	156.2	158.9	161.3	Pass
QB000426	1900.7	1910.8	1894.0	1909.2	183.2	182.8	182.2	183.8	Pass
QB000523	2026.0	2017.9	1998.5	2020.9	157.8	157.7	155.0	156.4	Pass
QB000524	2050.2	2064.0	2015.1	2048.1	108.0	109.3	110.1	108.5	Pass