C.3.3.6 Subgroup 6, scanning electron microscope (SEM).

C.3.3.6.1 Sample selection and reject criteria. Microcircuit sample selection and reject criteria shall be in accordance with method 2018 of MIL-STD-883 on a homogeneous lot. Discrete semiconductor devices with oxide steps or expanded contacts shall be tested with the sample selection and reject criteria in accordance with method 2077 of MIL-STD-750. In cases when dice are very large and comprise a large area of the wafer, the qualifying activity may approve other alternate sample selection plans.

* TABLE C-II. Microcircuit and semiconductor dice evaluation requirements.

Subgroup	Class		Test	MIL-STD-883		Quantity (accept number)	Reference paragraph
	K	H		Method	Condition		
1	X	X	Element electrical			100 percent	C.3.3.1
2	X	X	Element visual	2010 1/ 2069 1/ 2070 1/ 2072 1/ 2073		100 percent	C.3.3.2
3	X	X	Internal visual	2010 1/ 2069 1/ 2070 1/ 2072 1/ 2073		10 (0)	C.3.3.3 C.3.3.4.2
4	X		Temperature cycling	1010	C	2/ 10 (0)	C.3.3.3
	X		Mechanical shock or Constant acceleration	2002 2001	B, Y1 direction 3,000 g's, Y1 direction		
	X		Interim electrical				C.3.3.4.3
	X		Burn-in	1015	240 hours minimum at +125°C		
	X		Post burn-in electrical				C.3.3.4.3
	X		Steady-state life	1005			
	X	X	Final electrical				C.3.3.4.3
5	X	X	Wire bond evaluation	2011		10 (0) wires or 20 (1) wires	C.3.3.3 C.3.3.5
6	X		SEM	2018 1/ 2077		See method 2018 of MIL-STD-883 or method 2077 of MIL-STD-750	C.3.3.6

1/ MIL-STD-750 methods.
2/ For Class K sample sizes, see C.3.3.4.1.

C.3.4 Passive elements. Passive elements from each inspection lot will be evaluated in accordance with table C-III and C.3.4.1 through C.3.4.7 This evaluation is not required when the elements are acquired from the established reliability series of performance specifications and is listed on the QPL.

C.3.4.1 Subgroup 1, 100 percent electrical test of passive elements. Each passive element will be electrically tested at +25°C as specified in the element acquisition documents.