Contact Performance Specifications

Test	Performance Specifications
Current Rating	*(meets SAE-AS39029, paragraph 3.5.4.1)*

Contact Size	Maximum Amps *Crimp*
22D	5
20	7.5
16	13
12	23
10	33

Contact Millivolt Drop

Contact Size	Maximum Millivolt Drop *Crimp*
22D	73
20	55
16	49
12	42
10	33

Tensile Strength

Wire Size	Axial Load (Pounds)			
	Silver Tin-Plated Copper Wire		Nickel-Plated Copper Wire	
	Initial Condition Values	Thermal Condition Values	Initial Condition Values	Thermal Condition Values
0000	875	787.5	785	706.5
00	750	675.0	675	607.5
0	700	630.0	630	567.0
1	650	585.0	585	526.5
2	550	495.0	495	445.5
4	400	360.0	360	324.0
6	300	270.0	270	243.0
8	220	198.0	200	180.0
10	150	135.0	135	121.5

Wire Size	Axial Load (Pounds)			
	Silver Tin-Plated Copper Wire		Nickel-Plated Copper Wire	
	Initial Condition Values	Thermal Condition Values	Initial Condition Values	Thermal Condition Values
12	110	93.0	100	85.0
14	70	61.0	60	53.0
16	50	45	37	33
20	20	14	19	14.3
22	12	7.5	8	6.0
24	8	6	6	4.5
26	5	4.0	3	2.5
28	3	2.25	1	1.50
30	1.5	1.13	1.5	1.13

CONTACT MATERIALS AND SPECIFICATIONS

Component	Material	Notes
Pin Contact	Beryllium copper alloy per ASTM B197, 50 microinches gold plated per ASTM B488 Type II Code C Class 1,27 over nickel plate per QQ-N-290 Class 2, 30-150 microinches	Approved for Space Flight
Socket Contact	Beryllium copper alloy per ASTM B197, 50 microinches gold plated per ASTM B488 Type II Code C Class 1,27 over nickel plate per QQ-N-290 Class 2, 30-150 microinches.	Approved for Space Flight
Socket Contact Hood	Stainless steel, passivated per AMS-QQ-P-35	Approved for Space Flight

Contact Performance Specifications

Test	Performance Specifications
Durability	*(meets SAE-AS39029, paragraph 3.5.9)* No electrical or mechanical defects after 500 cycles of engagement and disengagement
Contact Retention	*(meets MIL-DTL-38999, paragraph 3.23)* The axial displacement of the contact shall not exceed .012 inch (0.30 mm). No damage to contacts or inserts shall result.
Pin Engagement End	*(meets SAE-AS39029 paragraph 3.4.1)* Unless otherwise specified, the mating end of all contacts (except size 22 and smaller) shall be formed with an approximate spherical radius.
Permeability	*(meets SAE-AS39029, paragraph 3.5.1)* When tested as specified in paragraph 4.7.2, the relative magnetic permeability of the contact shall be no greater than 2.0.
Vibration	*(meets SAE-AS39029, paragraph 3.5.10)* When contacts are tested as specified in paragraph 4.7.11, there shall be no electrical discontinuity of 1 microsecond or greater. There shall be no defects detrimental to the mechanical or electrical performance.
Salt Spray (corrosion)	*(meets SAE-AS39029, paragraph 3.5.12)* When tested as specified in 4.7.13, mated contacts shall withstand 48 hours of salt spray conditioning without defects detrimental to the mechanical or electrical performance.
Temperature life	*(meets SAE-AS39029, paragraph 3.5.13)* When tested as specified in paragraph 4.7.14, mated contacts shall withstand temperature conditioning for 1,000 hours without defects detrimental to mechanical or electrical performance. There shall be no diffusion/migration of the base metal through the contact outer plating.Class A - Maximum operating temperature +125°C. per paragraph 1.2.2
Dielectric withstanding voltage	*(meets SAE-AS39029, paragraph 3.5.19)* When tested as specified in paragraph 4.7.20, crimped contacts shall show no evidence of breakdown or flashover.
Workmanship	*(meets SAE-AS39029, paragraph 3.7)* Contacts shall be processed in such a manner as to be uniform in quality and shall be free from foreign material and burrs or sharp corners that might damage the connector or affect mating of the contacts. Burrs and sharp edges shall be removed 0.005 inch maximum.