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**QUALIFICATION TEST REPORT ABSTRACT
FOR
SERIES 807 MIGHTY MOUSE NW
“NETT WARRIOR CONNECTOR”
WITH HIGH-CURRENT SIZE 23 CONTACTS
REPORT NO. GT-22-260 ABSTRACT**



**Contact View
PN 8070-1676**



**Socket View
PN 8070-1675**

PREPARED BY: _____

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DATE: 1/23/2023

UPDATED BY: _____

DATE: _____

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Series 807 Mighty Mouse NW Connector
PN 8070-1676 / 8070-1675

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1.0 Product Description/Application

Series 807 Mighty Mouse NW Connectors are US Army Land Warrior Program and NATO STANAG 4695 standard qualified and NSN stock-listed for Nett Warrior. The original 6-pin Nett Warrior plug and receptacle are rugged, small form factor Mighty Mouse connectors designed for dismounted soldier hub and C4ISR Equipment.

1.1 Purpose

Testing was performed on mated Series 807 Mighty Mouse NW 6-pin plug (PN 8070-1676) and receptacle (PN 8070-1675), with Hi-Amp #23 socket with crown ring to determine their conformance to the performance requirements of EIA-364-70.

1.2 Scope

This report summarizes the environmental qualification testing of Series 807 plug and receptacle connectors, PN 8070-1676 and 8070-1675, with Hi-Amp, crown ring outfitted sockets, and standard pins, PN 809-001. All contacts were terminated to 18” of 22AWG wire. The information in this report was obtained from tests conducted by Glenair. Inc.

1.3 Conclusion

The Series 807 Mighty Mouse NW connector with Hi-Amp #23 contacts has been shown to be capable of meeting performance requirements of EIA-364-70.

1.4 Test Specimen

Test Sample Description	
Description	Part Number
Connector, In-line Plug, Mighty Mouse, Series 8070	8070-1676-06ZNU6-7PY
Connector, In-line Receptacle, Mighty Mouse, Series 8070	8070-1675-01ZNU6-7SY
Electrical Pin Contact, #23, for Mighty Mouse Connector	809-001

2.0 Qualification Test Summary

Qualification Test Summary			
Test Description		Abstract Reference	Results
Temperature Rise Versus Current	Internal T-rise	3.1.1	PASS
	External T-rise	3.1.2	PASS



3.0 Qualification Testing Details

3.1 **Temperature Rise Versus Current**

Test Method

EIA-364-70, Method 1

Test Setup

Contact positions 1 and 6 were energized. The connector was elevated 7” above the bench to avoid alteration of data from the surface of the bench and a barrier was placed around the connector to isolate it from ambient influence.

3.1.1 **Internal T-rise**

Test Method

EIA-364-70, Method 1

Requirement

Data was recorded directly from a thermocouple fixed to the interior of the connector in contact position 7. Max Ambient Operating Temperature determined by subtracting Internal Temperature Rise from Connector Max Temperature rating 175°C

Ambient Temperature Ranges		
Operating Current, Continuous	Maximum Internal Temperature Rise	Maximum Ambient Operating Temperature /1
8A	19°C	156°C
10A	29°C	146°C
11A	35°C	140°C
12A	42°C	133°C

/1 Based on Maximum Connector Operating Temperature Rating +175°

Results

Raw Data – Internal Temperature Rise				
Time	12 AMPS	11 AMPS	10 AMPS	8 AMPS
0	0	0	0	0
1	11.4	11.5	8.1	5.1
2	20.2	18.2	14.0	8.8
3	26.5	23.1	18.3	11.6
4	31.0	26.5	21.4	13.7
5	34.0	28.9	23.6	15.1
6	36.1	30.6	25.1	16.2
7	37.6	31.7	26.2	17.0
8	38.7	32.5	27.0	17.5
9	39.5	33.1	27.6	17.9
10	40.2	33.6	28.1	18.2
11	40.6	33.9	28.4	18.5



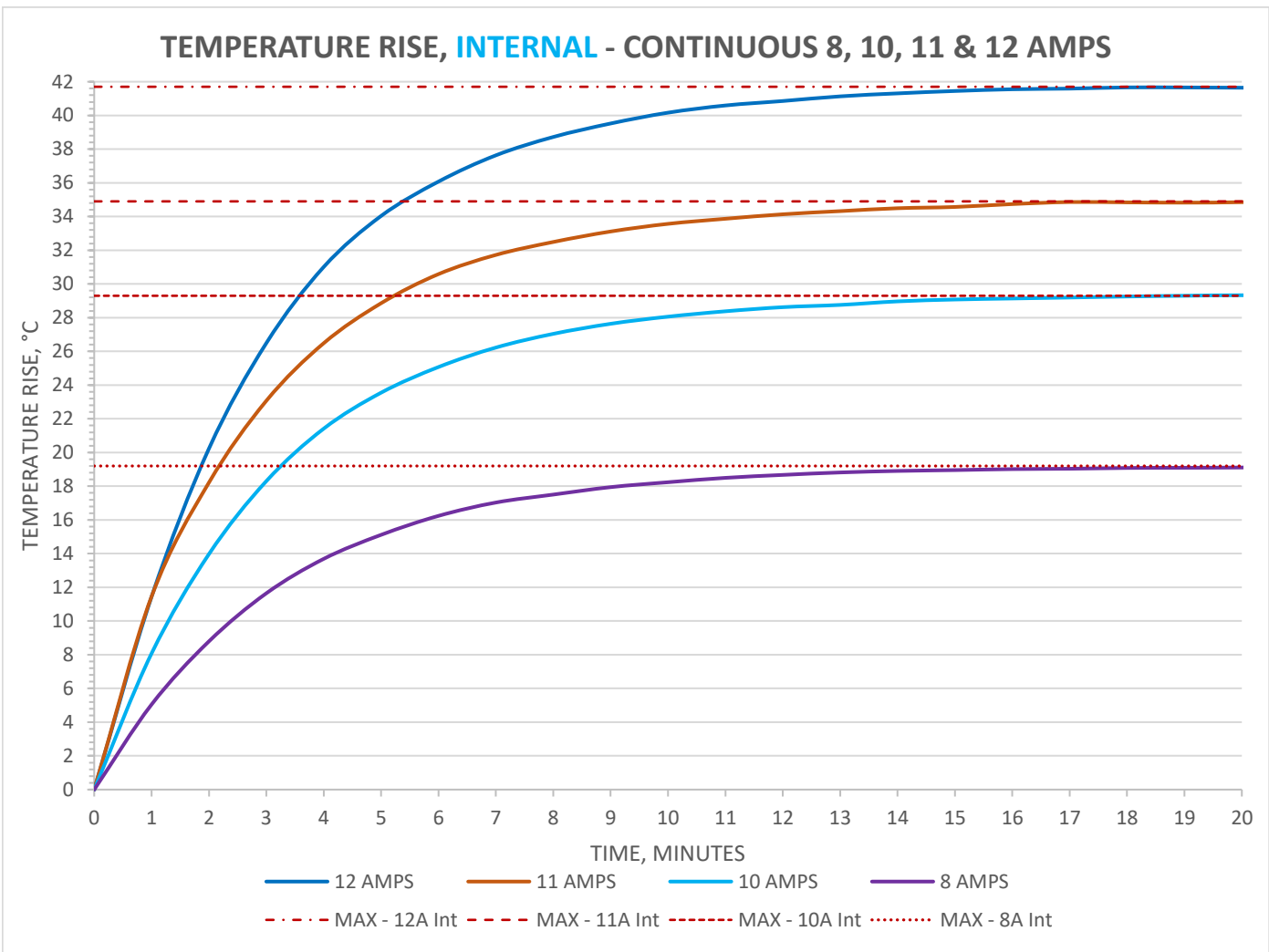
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Raw Data – Internal Temperature Rise, cont'd				
Time	12 AMPS	11 AMPS	10 AMPS	8 AMPS
12	40.9	34.1	28.6	18.7
13	41.1	34.3	28.8	18.8
14	41.3	34.5	29.0	18.9
15	41.4	34.6	29.1	19.0
16	41.6	34.7	29.1	19.0
17	41.6	34.9	29.2	19.0
18	41.7*	34.8	29.3*	19.1
19	41.7	34.8	29.3	19.1
20	41.6	34.9*	29.3	19.1
21	41.6	34.9	29.3	19.2*
22	41.6	34.9	29.3	19.2

* - Maximum Internal Temperature Rise at Steady State.





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3.1.2 External T-rise

Test Method

EIA-364-70, Method 1

Momentary Contact Temperature exposure limit IAW MIL-STD-1472, Table XXVII

Requirement

Data was recorded directly from a thermocouple fixed to the exterior of the connector. “Max Ambient Operating Temperature for MIL-STD-1472 determined by subtracting External Temperature Rise from Momentary Contact Temperature exposure limit 60°C

Ambient Temperature Ranges		
Operating Current, Continuous	Maximum External Temperature Rise	Max Ambient Operating Temperature for MIL-STD-1472 /2
8A	14°C	46°C
10A	22°C	39°C
11A	27°C	34°C
12A	31°C	29°C

/2 Based on Maximum Connector Operating Temperature Rating +175°C

Results

Raw Data – External Temperature Rise				
Time	12 AMPS	11 AMPS	10 AMPS	8 AMPS
0	0	0	0	0
1	5.0	5.9	3.4	2.2
2	12.1	11.5	8.1	5.2
3	17.7	15.8	11.8	7.7
4	21.8	18.8	14.5	9.5
5	24.5	21.0	16.4	10.8
6	26.3	22.6	17.8	11.7
7	27.7	23.6	18.8	15.2
8	28.7	24.3	19.5	12.9
9	29.3	24.9	20.0	13.3
10	29.9	25.3	20.4	13.6
11	30.3	25.6	20.7	13.8
12	30.5	25.8	20.9	13.9
13	30.7	25.9	21.0	14.1
14	30.8	26.1	21.1	14.1
15	31.0	26.2	21.3	14.2
16	31.1	26.3	21.3	14.2
17	31.1	26.4	21.3	14.2
18	31.2**	26.3	21.4	14.3
19	31.2	26.3	21.5**	14.3
20	31.2	26.4	21.4	14.3



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Raw Data – External Temperature Rise, cont'd				
Time	12 AMPS	11 AMPS	10 AMPS	8 AMPS
21	31.2	26.5**	21.4	14.3
22	31.2	26.4	21.5	14.4**

** - Maximum External Temperature Rise at Steady State.

