



<b>Project No.:</b>	PRJ-22-000902821	<b>Request ID.:</b>	BLTE-2024-007
<b>Part No:</b>	2445483-1, 2445483-7	<b>Tested date and lab</b>	14-Nov-2023 TO 15S-Nov-2023
		<b>Environmental condition:</b>	23 ± 5°C @ 45 to 70 %RH
<b>Description:</b>	AMPACT BAT - SMALL	<b>Date of report:</b>	11-Dec-2023
<b>Customer:</b>	-	<b>Specification:</b>	ANSI C119.4 - 2022
<b>Requested by:</b>	Arjun K A	<b>Reason for testing:</b>	Product Validation

**Scope:** This report covers the mechanical performance of AMPACT BAT Connector P/N 2445483-1 & P/N 2445483-7.

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**Summary of test results:**

	As per customer test request	
Mechanical Pull out Test	Test group 1	✓ Passed
Mechanical Pull out Test	Test group 2	✓ Passed
Mechanical Pull out Test	Test group 3	✓ Passed

✓ Passed / ✗ Not passed / □ Test not performed / ■ Test performed without conclusion

The report shall not be reproduced except in full without the prior approval of Bhaskara lab. Sampling is not carried out by the lab. Traceability of measurements is established to ISO standards through calibration at accredited lab. The above results relate only to the sample tested.

<b>Prepared by:</b>  Arjun K A Date: 12-12-2023	<b>Reviewed by / Supervisor:</b>  Lijith Sathyanathan Date: 11-03-2024	<b>Authorized by / Manager:</b>  Supreet Banaji Date: 14-03-2024
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**1. Introduction**

**1.1 Purpose**

The testing was performed on AMPACT BAT Connector P/N 2445483-1 & P/N 2445483-7 with conductor mentioned in Table 2 to determine its compliance to Class 3 (minimum tension), Pull Out test in accordance with ANSI C119.4-2022.

**1.2 Product Description**

The AMPACT BAT Connector are used for making connections between Aluminum to Aluminum or Aluminum to Copper Conductors on bare overhead applications. This assembly provides a method of making tap connections on primary and secondary distribution lines. To accomplish the installation, the wedge is driven between two opposing conductors by tightening the hex bolt with a battery operated or pneumatic impact tool until the C-body is fully extended. This ensures the C-body develops high clamping force on the conductors and the wedge is locked in place to provide a secure and reliable connection.

**1.3 Test Sequence & Specimens**

Test or Examination	Group #		
	1	2	3
Examination of Product	1, 3	1, 3	1, 3
Mechanical Pull-Out Test	2	2	2

**Table 1** Test Group

Note: Number indicates the sequence in which tests were performed.

The Following Part Numbers and Quantities were used.

GROUP #	CONNECTOR P/N	QUANTITY	RUN CONDUCTOR	TAP CONDUCTOR
1	2445483-1	3	4/0 ACSR	4/0 ACSR
2	2445483-1	3	4/0 AAC	4/0 AAC
3	2445483-7	3	#4 ACSR	#6 AAC

**Table 2** Test sample list

**1.4 Conclusion**

The performance of the AMPACT BAT Connector P/N 2445483-1 & P/N 2445483-7 complied with the test requirements of ANSI C119.4-2022 Class 3 Mechanical tensile test.

**2. Summary of Testing**

2.1 Examination of Product

All samples were examined visually and functionally before and after tests and were in satisfactory condition.

2.2 Mechanical Pull-Out Test, Class 3 (Group 1, 2, 3)

The samples that were submitted to the test had to be able to withstand a minimum tensile load which was equal to 5% of the tensile rating of the conductors.

All Specimens passed the test. Refer to Table 3 below for complete test results.

SN	CONNECTOR P/N	CONDUCTOR		ACCEPTENCE CRITERIA (lbs)	MODE OF FAILURE	TEST STATUS
		MAIN	TAP			
1	2445483-1	4/0 ACSR	4/0 ACSR	417.5	Conductors slipped from connector	Passed
2						
3						
1	2445483-1	4/0 AAC	4/0 AAC	191.5	Conductors slipped from connector	Passed
2						
3						
1	2445483-7	#4 ACSR	#6 AAC	50	#6 AAC conductor broke off from connector	Passed
2						
3						

Table 3 Test Results

### 3. Test Methods

#### 3.1 Examination of Product

The sampling was performed by the requester and received at the test location Bhaskara Lab Energy BU, Bengaluru India on 06-Nov-2023.

They were examined visually and functionally.

#### 3.2 Mechanical Tensile Test

AMPACT BAT Connectors with conductors mentioned in table 2 were tested using Instron tensile machine (Model 5900R). The machine was calibrated, and an axial upward force was applied until failure. The rate of the upward force was based on a crosshead speed of 0.25"/minute/foot of the total length of the assembly for all the samples. At the end, the machine was returned to initial conditions, the connectors were removed to identify the mode of failure.

4. Representative Photographs of test set-up & specimens

4.1 Group 1

Figure 1: Representative photograph of Bolted Ampact Tap Connector P/N 2445483-1 with 4/0 ACSR and 4/0 ACSR conductors before and after Mechanical Pull-Out, Class 3 Test to ANSI C119.4:2022.



Fig 1.1: Test setup



Fig 1.2: Before test



Fig 1.3: After test

4.2 Group 2

Figure 2: Representative photograph of Bolted Ampact Tap Connector P/N 2445483-1 with 4/0 AAC and 4/0 AAC conductors before and after Mechanical Pull-Out, Class 3 Test to ANSI C119.4:2022.



Fig 2.1: Test setup



Fig 2.2: Before test



Fig 2.3: After test

4.3 Group 3

Figure 3: Representative photograph of Bolted Impact Tap Connector P/N 2445483-7 with #4 ACSR and #6 AAC conductors before and after Mechanical Pull-Out, Class 3 Test to ANSI C119.4:2022.



Fig 3.1: Test setup



Fig 3.2: Before test



Fig 3.3: After test

5. Customer Drawing C-2445483

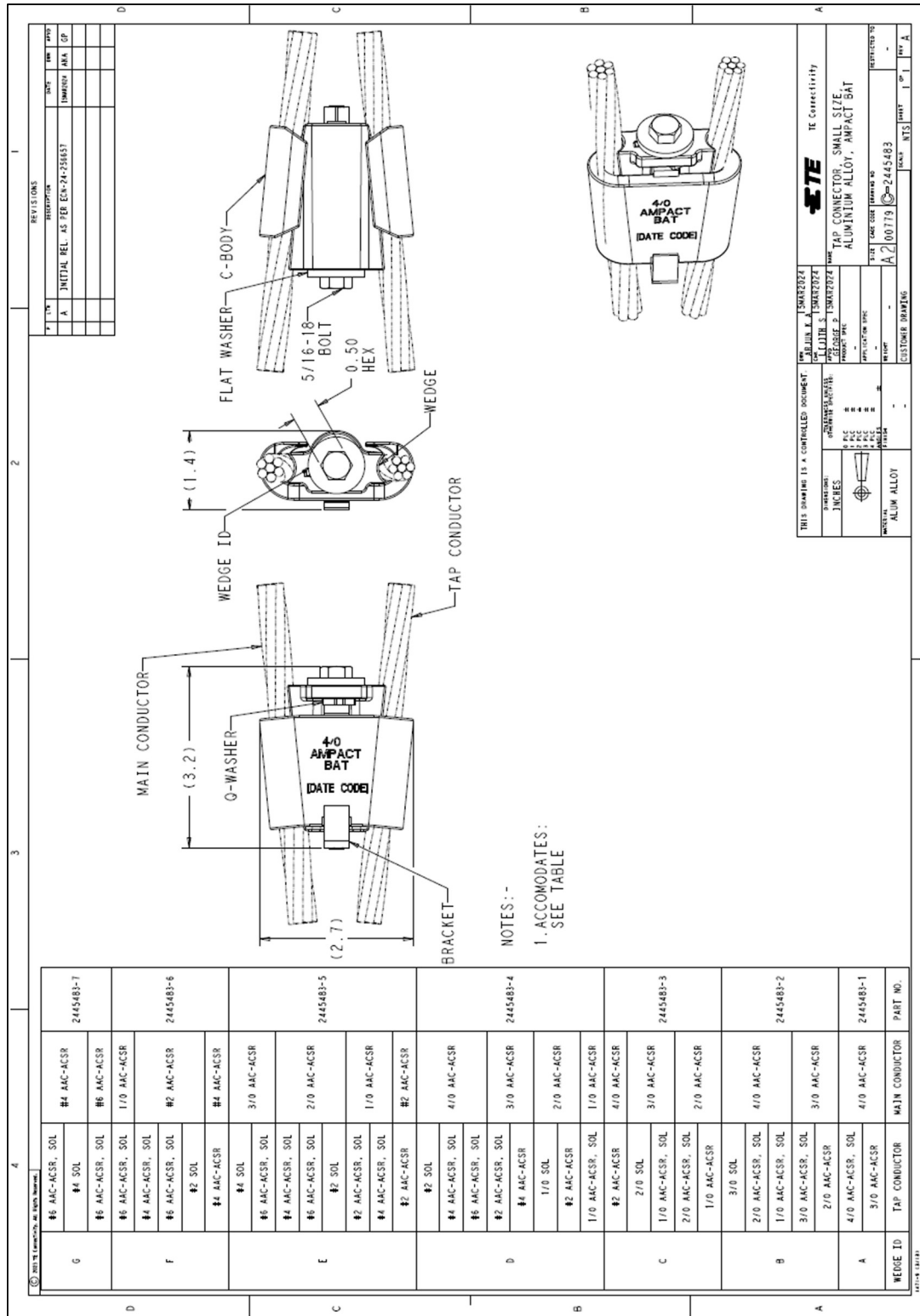


Fig 4: Customer Drawing of AMPACT BAT – Small connector P/N 2445483



Document History

Change Date	Rev.	Page	Main Changes (short description)	Name
14 Mar 2024	A	-	First release - Product Validation	<a href="#">Lijith Sathyanathan</a>

End of test report