



DEFENSE LOGISTICS AGENCY
DEFENSE SUPPLY CENTER, COLUMBUS
PO BOX 3990
COLUMBUS OH 43218-3990

IN REPLY
REFER TO

DSCC-VAT (K Bernier/DSN 850-0563/(614)692-0563)

22 January 2009

MEMORANDUM FOR VSS

SUBJECT: Engineering Practices Study Concerning a possible change in voltage from 15 to 16 in MIL-PRF-55365, MIL-PRF-39003 and MIL-PRF-39006.
Project number 5910-2008-026

The subject engineering practices study is dated 22 January 2009. If you have any questions please contact the project officer Ken Bernier, by email at Kenneth.bernier@dla.mil or by phone at 614-692-0563.

Michael A. Radecki
Chief
Electronic Components Team



ENGINEERING PRACTICE STUDY
TITLE: CHANGE IN VOLTAGE FROM 15 VOLTS TO 16 VOLTS IN MIL-PRF-39003, MIL-PRF-39006
AND MIL-PRF-55365
PROJECT NUMBER 5910-2008-026

22 January 2009
(approval date)

STUDY PROJECT (SEE ENCLOSED)

FINAL REPORT

Study conducted by Ken Bernier

Prepared by:

Ken Bernier
DSCC-VAT

Approved by:

Michael A. Radecki
Chief
Electronic Component Team

EP STUDY: CONCERNING POSSIBLE CHANGE IN VOLTAGE FROM 15 VOLTS TO 16 VOLTS (MIL-PRF-39003, MIL-PRF-39006 MIL-PRF-55365)
PROJECT NUMBER 5910-2008-026

Objective

This engineering practices study was conducted to determine the feasibility of changing parts rated at 15 Vdc to a voltage rating of 16 Vdc in the tantalum capacitor.

Background

We had an inquiry from a QPL supplier regarding the fact that military parts are specified at 15 volts and industry uses 16 volts.

At this time the military specifications specify a rating of 15 volts for tantalum capacitors as shown in MIL-PRF-55365, MIL-PRF-39003 and MIL-PRF-39006; standard commercial parts for tantalum specify a 16 volt rating.

These questions were considered:

1. What, if any, parameter changes shown below are necessary if there is a change from 15 volts to 16 volts? i.e. [leakage current, dissipation factor, de-rated voltage, surge voltage, impedance, capacitor change, and ESR].
2. What effect, if any, would there be in NSN descriptions for these capacitors?
3. Are there any benefits, other than uniformity with commercial catalogs, to changing the voltage from 15 to 16 volts?

Conclusion:

After receiving comments from manufacturers they pointed out that the change from 15 volts to 16 volts should only be considered for style CWR11 of [MIL-PRF-55365/8](#).

No manufacturer offered any benefits to the military other than uniformity with commercial catalog. 16 volts is the standard in commercial capacitors of this type.

A change in the voltage from 15 Vdc to 16 Vdc would have a direct effect on the NSN numbers assigned to the current capacitor part numbers. The NSN numbers would also be affected by any changes to capacitor parameters necessitated by the voltage change.

RECOMMENDATIONS:

Since there is no concrete benefit to the military, then no changes should be made.