

PERFORMANCE SPECIFICATION

CAPACITOR, FIXED, CERAMIC DIELECTRIC (GENERAL PURPOSE),  
ESTABLISHED RELIABILITY and NONESTABLISHED RELIABILITY,  
GENERAL SPECIFICATION FOR

This amendment forms a part of MIL-PRF-39014F, dated 16 September 1997, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 4

3.5.2, third line: after "qualifying activity" add "(see appendix)".

3.5.2.1, and 3.5.2.2; delete.

PAGE 13

4.6.1.1.1, delete the Style Groups and substitute the following:

<u>"Group</u>	<u>Style</u>
1	CKR04, CKR05
2	CKR06, CKR08
3	CKR11, CKR12, CKR13, CKR14, CKR15, CKR16 (voltage temperature limits may be combined)
4	CKR75, CKR76, CKR82, CKR83
5	CKR22, CKR23, CKR24
6	CKR25, CKR26, CKR27"

PAGE 23

4.7.15e, second line: delete "relative humidity of 50 percent  $\pm$  5 percent" and substitute "relative humidity of 30 percent to 60 percent".

PAGE 27

6.2e, delete and substitute:

"e. Lead length, if different from that specified (applicable to performance specification sheets MIL-PRF-39014/1, MIL-PRF-39014/2, MIL-PRF-39014/5, MIL-PRF-39014/21, and MIL-PRF-39014/23). When specified, lead lengths may be a minimum of .625 inch (15.88 mm) or 1.00 inch (25.4 mm) long, as applicable (see 3.1), for use in tape and reel automatic insertion equipment.

After 40.2 add the following:

“50. SOLDER DIP (RETINNING) LEADS

50.1 Solder dip (retinning) leads. The manufacturer (or their authorized category C distributor) may solder dip/retin the leads of capacitors supplied to this specification provided the solder dip process has been approved by the qualifying activity.

50.2 Qualifying activity approval. Approval of the solder dip process will be based on one of the following options:

- a. When the original lead finish qualified was hot solder dip lead finish 52 in accordance with MIL-STD-1276 (NOTE: The 200 microinch maximum thickness is not applicable). The manufacturer shall use the same solder dip process for retinning as was used in the original manufacture of the capacitor.
- b. When the lead originally qualified was not solder dip lead finish 52 of MIL-STD-1276 as prescribed in 50.2a, approval for the process to be used for solder dip shall be based on the following procedure:
  - (1) Thirty samples of any capacitance value for each style and lead finish shall be subjected to the manufacturer' solder dip process. The capacitors shall then be subjected to all group A, subgroup 1 post-electrical tests, with no defects allowed. (NOTE: If radiographic inspection is required in group A, this test shall also be performed, with no defects allowed).
  - (2) Ten of the 30 samples shall then be subjected to the solderability test, with no defects allowed.
  - (3) The remaining 20 samples shall be subjected to the resistance to soldering heat test, followed by the moisture resistance test, with no defects allowed.

50.3 Solder dip/retinning options. If the manufacturer (or authorized category C distributor) solder dips or retins the leads as part of normal production, or as a corrective action for solderability test failure, the following shall apply:

- a. Following any solder dip or retinning process, the post-test electrical measurements specified in group A, subgroup 1 shall be performed on a 200 piece sample for each eight hours of manufacturing. In the event of one or more defects, the individual production lot (or lots) from which the defects originated shall be subjected to 100 percent testing for dielectric withstanding voltage (DWV), insulation resistance (IR) (at 25°C), capacitance, and dissipation factor (DF), and must meet the percent defective allowable (PDA) requirements as specified in 4.6.1.2.2.1.
- b. PPM rate following the solder dip/retinning shall be reported each six months. The calculation method shall be in accordance with EIA-554-1.

MIL-PRF-39014F  
AMENDMENT 1

Custodians:

Army - CR  
Navy - EC  
Air Force - 11  
DLA - CC

Review activities:

Army - AR, AT, AV, CR4, MI  
Navy - MC  
Air Force - 19, 99

Preparing activity:  
Army - CR

Agent:  
DLA - CC

(Project 5910-2020)