

October 2000 P-2.2
DSCC FILM CAPACITOR ACTIONS

Polycarbonate Dielectric Discontinued

- Bayer to discontinue manufacturing at end of year.
- Bayer is sole producer of capacitor grade polycarbonate film.
- Bayer's plan will likely lead to the cancellation of many specifications.
- Many Military specifications affected:
 - MIL-PRF-19978/5, /8
 - MIL-PRF-39022/7, /10, and /11
 - MIL-PRF-55514/1, /4, /7, /8, /11, /12
 - MIL-PRF-83421/1
 - MIL-PRF-87217/1
- Polyphenylene sulfide (PPS) is currently closest replacement.
 - Offered in MIL-PRF-83421/6 with same case size as /1.
 - PPS specification is in work with same case size as MIL-PRF-55514/7.
- Flourene Polyester (FPE) film is very promising.
 - Air Force Research Lab developed film.
 - Currently available in 12 micron - Ferrania Imaging Technologies.
 - Work is continuing on thinner films (5 micron and smaller).
 - Capacitors made from this dielectric have very good properties.
 - +200 °C operating temperature.
 - 2X voltage breakdown strength of polycarbonate.

Documents Released

- MIL-C-27287, /1, MIL-C-25/12, /13, and /14 cancelled.
- Updated all DSCC Drawings (5 Year Review)
 - 88012C
 - 89028A
 - 89115C
 - 88028B
 - 89041A
 - 92019A
 - 88029B
 - 89062A
 - 92020A

Document Actions In Process

- MIL-PRF-39022
 - Full rewrite of basic, /1, /2, /7, /8, /9, and /10. Release of 2nd draft expected soon.
- MIL-PRF-83421
 - Full rewrite of basic, /1, and /2. Release of 2nd draft expected soon.

Sources for Free Download of Military Documents

- DSCC - Most Defense Supply Center Columbus documents available.
 - <http://www.dsccl.dla.mil/Programs/MilSpec/DocSearch.asp>
- Defense Automation and Production Service - most DoD documents available.
 - <http://astimage.daps.dla.mil/quicksearch/>

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