A KYOCERA GROUP COMPANY

# AVX
# Discharge Capacitors

In 1979, Thomson Passive Components (acquired by the AVX Corporation in 1998) developed the **CONTROLLED SELF-HEALING technology** for medium power dry filtering capacitors.

In 1988, AVX started the development of **CONTROLLED SELF-HEALING technology** for impregnated DC filtering capacitors (TRAFIM series). This product range is very popular and has been licensed by other manufacturers.

Improvements of film technology and its metallization the last 10 years have led to a significant increase of the energy density available in AVX's TRAFIM series. In fact, it is now considered one of the most compact capacitors on the market.

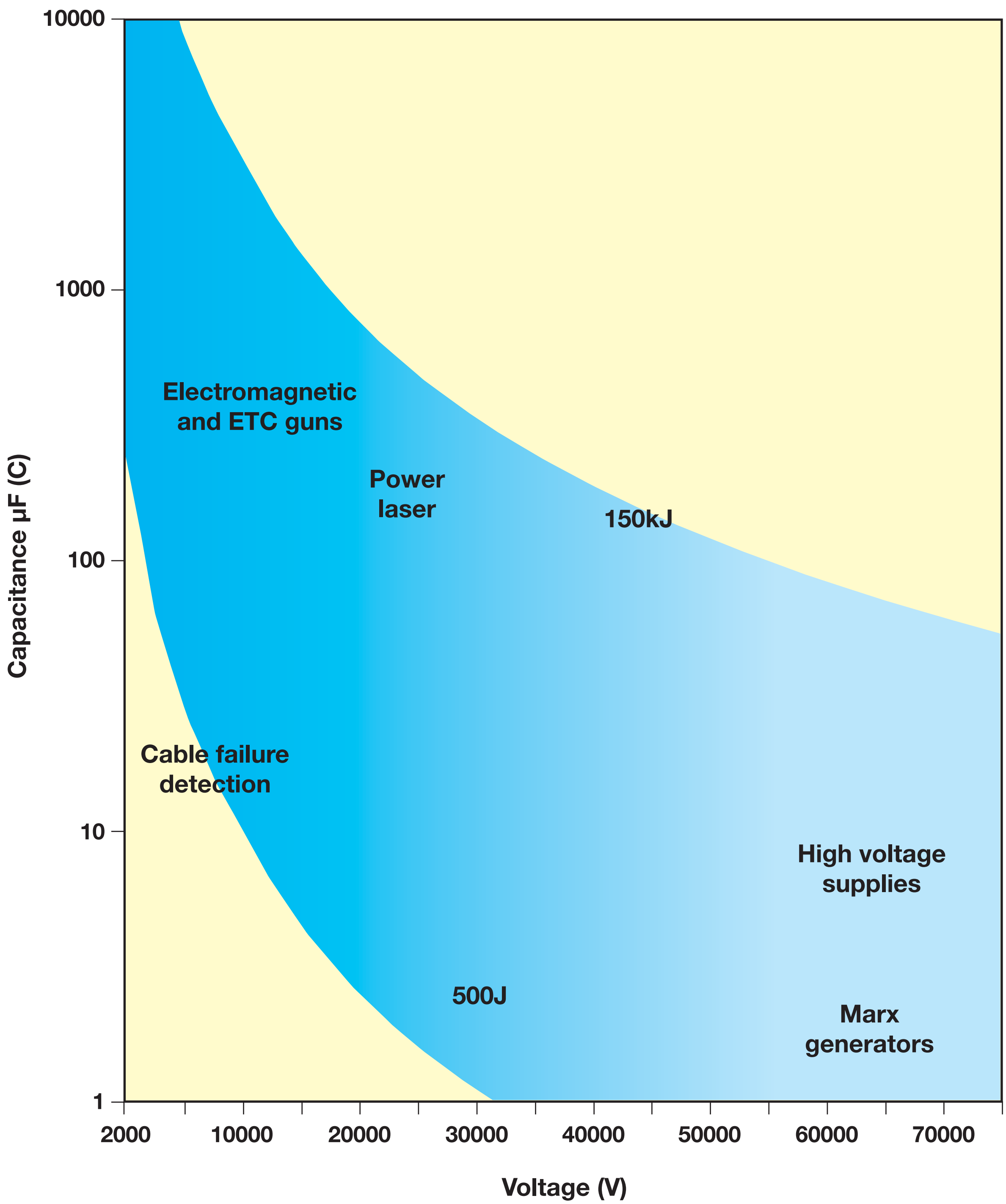
Today AVX offers impregnated capacitors based on the same controlled self-healing technology, which are ideal for discharge applications. The voltages of these DISFIM capacitors range from 2kV to 75kV. The maximum available energy per can is 150kJ.

In the past, discharge capacitors have used foil electrodes. Any defect of weak point in the film led to a catastrophic failure of the capacitor involving a short-circuit with even a risk of explosion.

Now, with the controlled self-healing technology, the capacitance of the DISFIM is divided into several million elementary capacitances. The weak points in the dielectric are insulated and the capacitor continues to work without any short-circuit or risk of explosion. DISFIM capacitors may represent more than 10,000 square meters. Only some square millimeters of active surface are lost for every self-healing action. Over the life of the capacitor, the capacitance gradually decreases. The capacitor is usually designed to lose less than 5% of its initial capacitance during its whole lifetime.

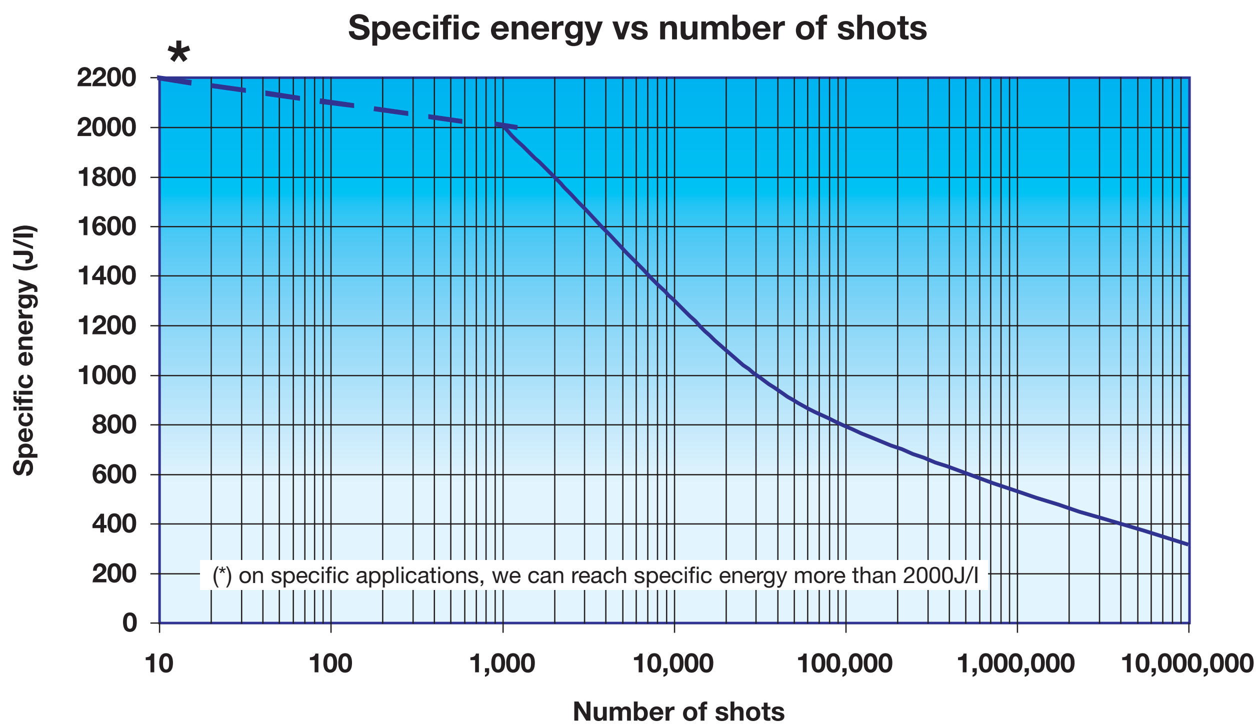
# DISFIM Products

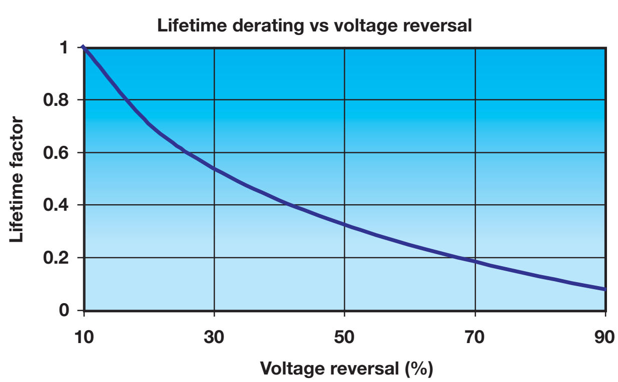
## DISFIM RANGE

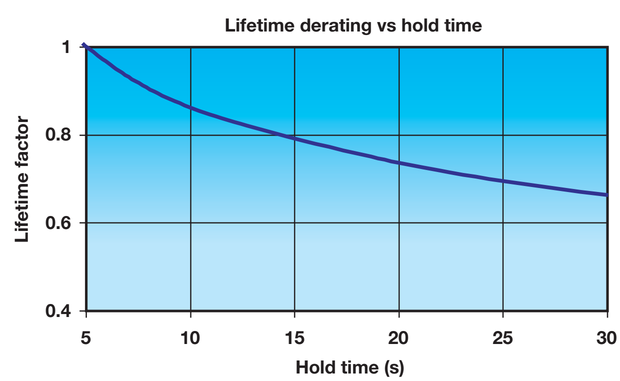


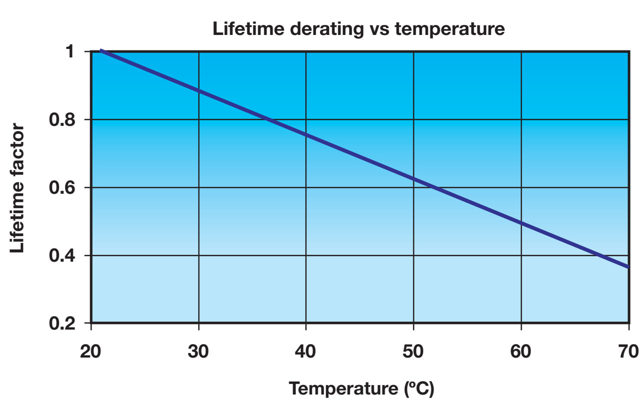

Tolerance on capacitance: ±10%, ±5%, ±2%
Stray inductance: 50nH to 500nH

## SPECIFIC ENERGY CALCULATION



# DISFIM Products

This questionnaire lists the information we require to prepare an offer according to your exact requirements.

Name: ______________________________
Company: ______________________________
Address: ______________________________
______________________________

Function: ______________________________
Telephone: ______________________________
Fax: ______________________________
Email: ______________________________

**Expected dimensions:**
Width (mm):
Length (mm):
Height (mm):

**Expected stray inductance:**
nH

**Number of terminals:**

**Capacitor operating position:**

upright horizontal tilted upside down

**Environment:**
(moisture, vibrations...)

**Waveforms (U/I)**

Capacitance/Tolerance μF %

Charging Voltage V

Capacitance Time s

Hold Time s

| | | Normal Conditions | Faulty Conditions |
|---|---|---|---|
| **Expected lifetime** | *hours* | | |
| **or** | *shots* | | |

| | | | |
|---|---|---|---|
| **Peak current** | *(A)* | | |

**Aperiodic discharge**

| | | | |
|---|---|---|---|
| Pulse duration (5% I peak) | *(μs)* | | |
| Time to I peak | (μs) | | |

**Oscillatory discharge**

| | | | |
|---|---|---|---|
| Reversal voltage | *(%)* | | |
| Ringing frequency | *(Hz)* | | |

**Repetition Rate**

| | |
|---|---|
| Single shots<br>*(shot/min hour day )* | |

**Burst**

| | | |
|---|---|---|
| Impulses per burst | | |
| Impulse rep. Rate | *(Hz)* | |
| Burst rep. Rate<br>*(burst/s min hour )* | | |

Operating temperature from __________ to __________ ºC

Storage temperature from __________ to __________ ºC

Cooling conditions
Natural convection
Force air m/s
Oil

Remarks:

## AMERICAS

**AVX Myrtle Beach, SC**
**Corporate Offices**
Tel: 843-448-9411
FAX: 843-448-1943

**AVX Northwest, WA**
Tel: 360-699-8746
FAX: 360-699-8751

**AVX North Central, IN**
Tel: 317-848-7153
FAX: 317-844-9314

**AVX Midwest, MN**
Tel: 952-974-9155
FAX: 952-974-9179

**AVX Mid/Pacific, CA**
Tel: 510-661-4100
FAX: 510-661-4101

**AVX Southwest, AZ**
Tel: 602-678-0384
FAX: 602-678-0385

**AVX South Central, TX**
Tel: 972-669-1223
FAX: 972-669-2090

**AVX Southeast, GA**
Tel: 404-608-8151
FAX: 770-972-0766

**AVX Canada**
Tel: 905-238-3151
FAX: 905-238-0319

**AVX South America**
Tel: ++55-11-2193-7200
FAX: ++55-11-2193-7210

## EUROPE

**AVX Limited, England**
**European Headquarters**
Tel: ++44 (0) 1252-770000
FAX: ++44 (0) 1252-770001

**AVX/ELCO, England**
Tel: ++44 (0) 1638-675000
FAX: ++44 (0) 1638-675002

**AVX S.A., France**
Tel: ++33 (1) 69-18-46-00
FAX: ++33 (1) 69-28-73-87

**AVX GmbH, Germany**
Tel: ++49 (0) 8131-9004-0
FAX: ++49 (0) 8131-9004-44

**AVX srl, Italy**
Tel: ++390 (0)2 614-571
FAX: ++390 (0)2 614-2576

**AVX Czech Republic**
Tel: ++420 465-358-111
FAX: ++420 465-323-010

## ASIA-PACIFIC

**AVX/Kyocera, Singapore**
**Asia-Pacific Headquarters**
Tel: (65) 6286-7555
FAX: (65) 6488-9880

**AVX/Kyocera, Hong Kong**
Tel: (852) 2-363-3303
FAX: (852) 2-765-8185

**AVX/Kyocera, Korea**
Tel: (82) 2-785-6504
FAX: (82) 2-784-5411

**AVX/Kyocera, Taiwan**
Tel: (886) 2-2698-8778
FAX: (886) 2-2698-8777

**AVX/Kyocera, Malaysia**
Tel: (60) 4-228-1190
FAX: (60) 4-228-1196

**Elco, Japan**
Tel: 045-943-2906/7
FAX: 045-943-2910

**Kyocera, Japan - AVX**
Tel: (81) 75-604-3426
FAX: (81) 75-604-3425

**Kyocera, Japan - KDP**
Tel: (81) 75-604-3424
FAX: (81) 75-604-3425

**AVX/Kyocera, Shanghai, China**
Tel: 86-21 6341 0300
FAX: 86-21 6341 0330

**AVX/Kyocera, Beijing, China**
Tel: 86-10 8458 3385
Fax: 86-10 8458 3382

## ASIA-KED

**KED, Hong Kong**
Tel: (852) 2305 1080
FAX: (852) 2305 1405

**KED, Shanghai**
Tel: (86) 21 6859 9898
FAX: (86) 21 5887 2542

**KED, Beijing**
Tel: (86) 10 5869 4655
FAX: (86) 10 5869 4677

**KED, South Korea**
Tel: (82) 2 783 3288
FAX: (82) 2 783 3207

**KED, Taiwan**
Tel: (886) 2 2950 0268
FAX: (886) 2 2950 0520

**KED, Singapore**
Tel: (65) 6255 3122
FAX: (65) 6255 5092


**Contact:**

A KYOCERA GROUP COMPANY

**http://www.avx.com**

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