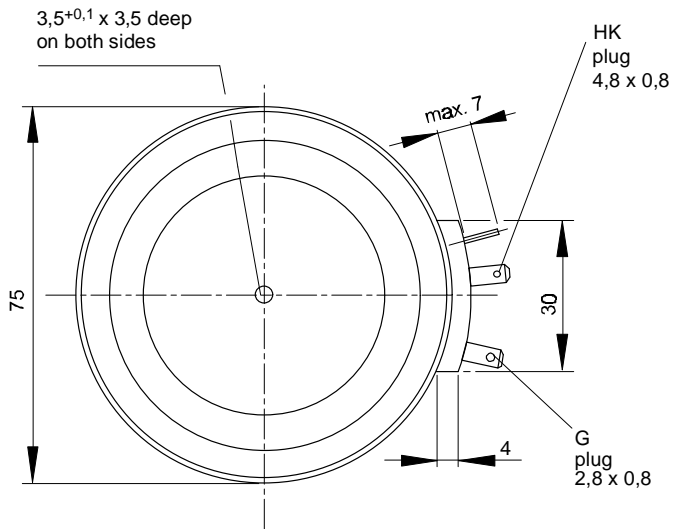
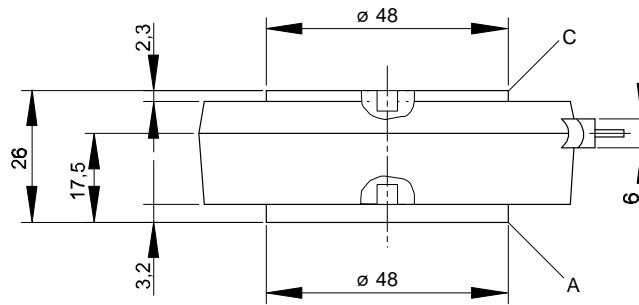


European Power-Semiconductor and Electronics Company

Marketing Information

T 729 N



VWK June 1996

T 729 N / T 730 N

Elektrische Eigenschaften

Höchstzulässige Werte

Periodische Vorwärts- und Rückwärts-Sperrspannung

Vorwärts-Stoßsperrspannung

Rückwärts-Stoßsperrspannung

Durchlaßstrom-Grenzeffektivwert

Dauergrenzstrom

Stoßstrom-Grenzwert

Grenzlastintegral

Kritische Stromsteilheit

Kritische Spannungssteilheit

Electrical properties

Maximum rated values

repetitive peak forward off-state and reverse voltages

non-repetitive peak forward off-state voltage

non-repetitive peak reverse voltage

RMS on-state current

average on-state current

surge current

I² t-value

critical rate of rise of on-state current

critical rate of rise of off-state voltage

$t_{vj} = -40^{\circ}\text{C} \dots t_{vj\text{max}}$

$t_{vj} = -40^{\circ}\text{C} \dots t_{vj\text{max}}$

$t_{vj} = +25^{\circ}\text{C} \dots t_{vj\text{max}}$

$t_c = 85^{\circ}\text{C}$

$t_c = 48^{\circ}\text{C}$

$t_{vj} = 25^{\circ}\text{C}, t_p = 10 \text{ ms}$

$t_{vj} = t_{vj\text{max}}, t_p = 10 \text{ ms}$

$t_{vj} = 25^{\circ}\text{C}, t_p = 10 \text{ ms}$

$t_{vj} = t_{vj\text{max}}, t_p = 10 \text{ ms}$

DIN IEC 747-6, $f = 50 \text{ Hz}$,
 $v_L = 10 \text{ V}$, $i_{GM} = 1 \text{ A}$, $di_G/dt = 1 \text{ A}/\mu\text{s}$

$t_{vj} = t_{vj\text{max}}, v_D = 0,67 V_{DRM}$

5.Kennbuchstabe/5th letter C

5.Kennbuchstabe/5th letter F

V_{DRM}, V_{RRM}

V_{DSM}

V_{RSM}

I_{TRMSM}

I_{TAVM}

I_{TSM}

$I^2 t$

$(di_T/dt)_{cr}$

$(dv_D/dt)_{cr}$

3600 3800 4000 V

4200

3600 3800 4000 V

4200

3700 3900 4100 V

4300

1840 A

730 A

1170 A

17600 A

15800 A

1550000 A²s

1250000 A²s

80 A/ μs

500 V/ μs

1000 V/ μs

Charakteristische Werte

Durchlaßspannung

Schleusenspannung

Ersatzwiderstand

Zündstrom

Zündspannung

Nicht zündender Steuerstrom

Nicht zündende Steuerspannung

Haltestrom

Einraststrom

Vorwärts- und Rückwärts-Sperrstrom

Zündverzögerung

Freiwerdezeit

Characteristic values

on-state voltage

threshold voltage

slope resistance

gate trigger current

gate trigger voltage

gate non-trigger current

gate non-trigger voltage

holding current

latching current

forward off-state and reverse currents

gate controlled delay time

circuit commutated turn-off time

$t_{vj} = t_{vj\text{max}}, i_T = 3500 \text{ A}$

$t_{vj} = t_{vj\text{max}}$

$t_{vj} = t_{vj\text{max}}$

$t_{vj} = 25^{\circ}\text{C}, v_D = 6 \text{ V}$

$t_{vj} = 25^{\circ}\text{C}, v_D = 6 \text{ V}$

$t_{vj} = t_{vj\text{max}}, v_D = 6 \text{ V}$

$t_{vj} = t_{vj\text{max}}, v_D = 0,5 V_{DRM}$

$t_{vj} = t_{vj\text{max}}, v_D = 0,5 V_{DRM}$

$t_{vj} = 25^{\circ}\text{C}, v_D = 6 \text{ V}, R_A = 2 \Omega$

$t_{vj} = 25^{\circ}\text{C}, v_D = 6 \text{ V}, R_{GK} \geq 10 \Omega$

$i_{GM} = 1 \text{ A}, di_G/dt = 1 \text{ A}/\mu\text{s}, t_g = 20 \mu\text{s}$

$t_{vj} = t_{vj\text{max}}, v_D = V_{DRM}, v_R = V_{RRM}$

DIN IEC 747-6, $t_{vj} = 25^{\circ}\text{C}, i_{GM} = 1 \text{ A}$,

$di_G/dt = 1 \text{ A}/\mu\text{s}$

$t_{vj} = t_{vj\text{max}}, i_{TM} = i_{TAVM}, v_{RM} = 100 \text{ V}, v_{DM} = 0,67 t_q$

$v_{DRM}, dv_D/dt = 20 \text{ V}/\mu\text{s}, -di_T/dt = 10 \text{ A}/\mu\text{s}$,

4 Kennbuchstabe/4th letter O

v_T

$V_{T(TO)}$

r_T

I_{GT}

V_{GT}

I_{GD}

V_{GD}

I_H

I_L

i_D, i_R

t_{gd}

t_q

max. 3,4 V

1,2 V

0,57 m Ω

max. 300 mA

max. 2,5 V

max. 20 mA

max. 10 mA

max. 0,3 V

max. 300 mA

max. 2500 mA

max. 200 mA

max. 3,5 μs

typ. 400 μs

Thermische Eigenschaften

Innerer Wärmewiderstand

Übergangs-Wärmewiderstand

Höchstzul. Sperrschichttemperatur

Betriebstemperatur

Lagertemperatur

Thermal properties

thermal resistance, junction to case

thermal resistance, case to heatsink

max. junction temperature

operating temperature

storage temperature

Kühlfläche/cooling surface

beidseitig/two-sided, $\Theta = 180^{\circ} \text{ sin}$

beidseitig/two-sided, DC

Anode/anode, $\Theta = 180^{\circ} \text{ sin}$

Anode/anode, DC

Kathode/cathode, $\Theta = 180^{\circ} \text{ sin}$

Kathode/cathode, DC

Kühlfläche/cooling surface

beidseitig/two-sided

einseitig/single-sided

R_{thJC}

R_{thCK}

$t_{vj\text{max}}$

$t_{c\text{op}}$

t_{stg}

max. 0,0215 $^{\circ}\text{C}/\text{W}$

max. 0,0200 $^{\circ}\text{C}/\text{W}$

max. 0,0405 $^{\circ}\text{C}/\text{W}$

max. 0,0390 $^{\circ}\text{C}/\text{W}$

max. 0,0425 $^{\circ}\text{C}/\text{W}$

max. 0,0410 $^{\circ}\text{C}/\text{W}$

max. 0,0035 $^{\circ}\text{C}/\text{W}$

max. 0,0070 $^{\circ}\text{C}/\text{W}$

120 $^{\circ}\text{C}$

-40...+120 $^{\circ}\text{C}$

-40...+150 $^{\circ}\text{C}$

Mechanische Eigenschaften

Si-Element mit Druckkontakt, Amplifying-Gate

Anpreßkraft

Gewicht

Kriechstrecke

Feuchteklasse

Schwingfestigkeit

Gehäuse

Si-pellet with pressure contact, amplifying gate

clamping force

weight

creepage distance

humidity classification

vibration resistance

Case

Durchmesser/diameter 56 mm

F

G

DIN 40040

f = 50 Hz

F

G

18...43 kN

typ. 540 g

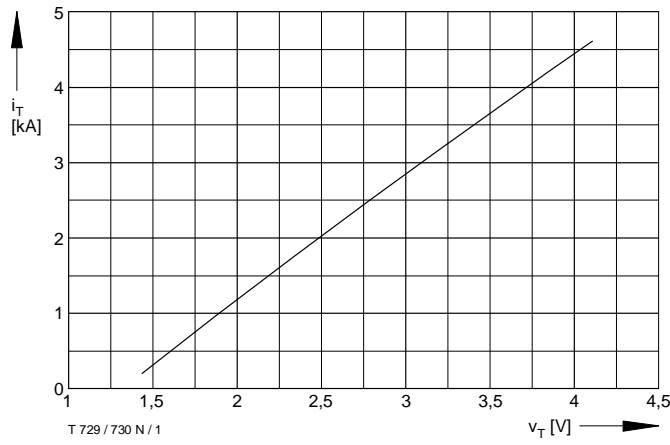
30 mm

C

50 m/s²

Titelseite / front page

Kühlkörper/heatsinks: K0.05F; K0.08F; 2K0.024W



T 729 / 730 N / 1

Bild / Fig. 1

Grenzdurchlaßkennlinie / Limiting on-state characteristic $i_T = f(v_T)$ $t_{vj} = t_{vj \max}$