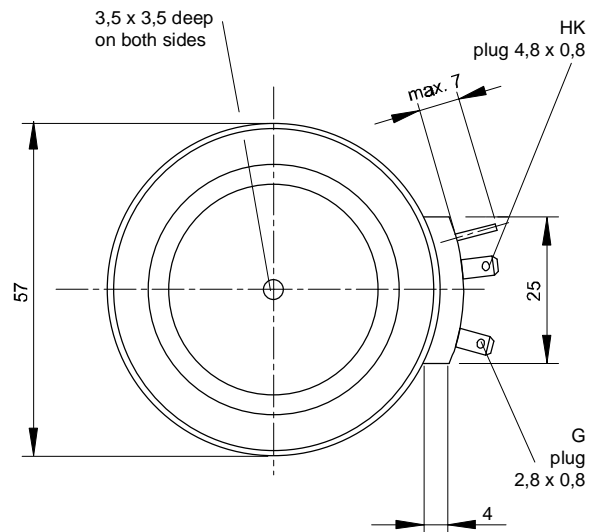
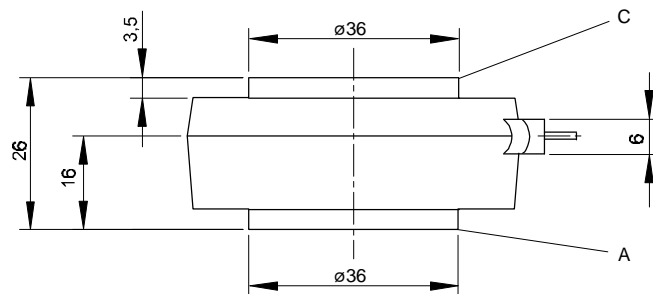




European Power-Semiconductor and Electronics Company

Marketing Information T 399 N



T 399 N 20...26

Elektrische Eigenschaften

Höchstzulässige Werte

Periodische Vorwärts- und Rückwärts-Spitzenstromspannung

Vorwärts-Stoßspitzensperrspannung

Rückwärts-Stoßspitzensperrspannung

Durchlaßstrom-Grenzeffektivwert

Dauergrenzstrom

Stoßstrom-Grenzwert

Grenzlastintegral

Kritische Stromsteilheit

Kritische Spannungssteilheit

Charakteristische Werte

Durchlaßspannung

Schleusenspannung

Ersatzwiderstand

Zündstrom

Zündspannung

Nicht zündender Steuerstrom

Nicht zündende Steuerspannung

Haltestrom

Einraststrom

Vorwärts- und Rückwärts-Sperrstrom

Zündverzögerung

Freiwerdezeit

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

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

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

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

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

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

$t_c = 41^{\circ}\text{C}$

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

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

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

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

DIN IEC 747-6, $f = 50\text{ Hz}$,

$V_L = 10\text{ V}, i_{GM} = 1,25\text{ A}, di_G/dt = 1,25\text{ A}/\mu\text{s}$

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

5.Kennbuchstabe/5th letter C

5.Kennbuchstabe/5th letter F

V_{DRM}, V_{RRM}

V_{DSM}

V_{RSM}

I_{TRMSM}

I_{TAVM}

I_{TSM}

$I^2 t$

$(di_T/dt)_{cr}$

$(dv_D/dt)_{cr}$

2000 2200 2400 V

2600 2800 3000 V

2100 2300 2500 V

2700 1000 A

399 A

636 A

9000 A

7900 A

405000 A²s

312050 A²s

120 A/ μs

500 V/ μs

1000 V/ μs

$t_{vj} = t_{vj\text{max}}, I_T = 1900\text{ A}$

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

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

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

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

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

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

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

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

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

$i_{GM} = 1,25\text{ A}, di_G/dt = 1,25\text{ A}/\mu\text{s}, t_g = 20\ \mu\text{s}$

$t_{vj} = t_{vj\text{max}}, V_D = V_{DRM}, V_R = V_{RRM}$

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

$di_G/dt = 1,25\text{ A}/\mu\text{s}$

$t_{vj} = t_{vj\text{max}}, I_{TM} = I_{TAVM}, V_{RM} = 100\text{ V}, V_{DM} = 0,67 V_{DRM}$

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

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. 3,35 V

1,15 V

1,12 m Ω

max. 250 mA

max. 2 V

max. 10 mA

max. 5 mA

max. 0,25 V

max. 200 mA

max. 620 mA

max. 150 mA

max. 3,3 μs

typ. 150 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, $\Theta = 180^{\circ}$ sin

beidseitig/two-sided, DC

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

Anode/anode, DC

Kathode/cathode, $\Theta = 180^{\circ}$ 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. 0,0455 $^{\circ}\text{C}/\text{W}$

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

max. 0,0665 $^{\circ}\text{C}/\text{W}$

max. 0,0650 $^{\circ}\text{C}/\text{W}$

max. 0,1375 $^{\circ}\text{C}/\text{W}$

max. 0,1360 $^{\circ}\text{C}/\text{W}$

max. 0,005 $^{\circ}\text{C}/\text{W}$

max. 0,010 $^{\circ}\text{C}/\text{W}$

125 $^{\circ}\text{C}$

-40...+125 $^{\circ}\text{C}$

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

Mechanische Eigenschaften Mechanical properties

Si-Elemente mit Druckkontakt, Amplifying-Gate

Anpreßkraft

Gewicht

Kriechstrecke

Feuchteklasse

Schwingfestigkeit

Si-pellet with pressure contact, amplifying gate

clamping force

weight

creepage distance

humidity classification

vibration resistance

Durchmesser/diameter 56 mm

F

G

DIN 40040

$f = 50\text{ Hz}$

F

G

DIN 40040

$f = 50\text{ Hz}$

7,5...17,5 kN

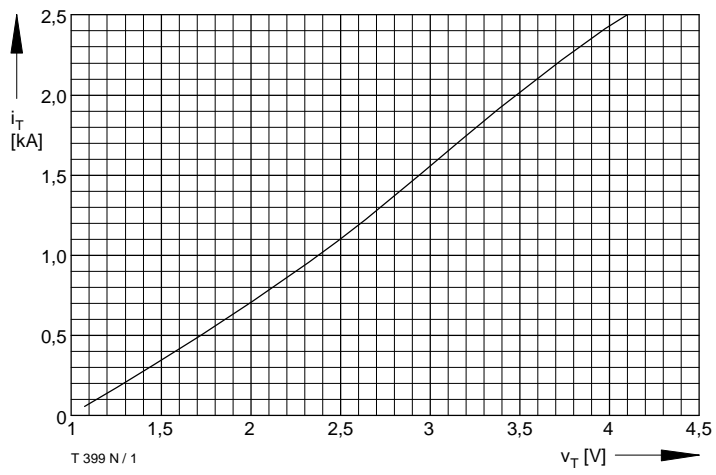
typ. 270 g

25 mm

C

50 m/s²

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



T 399 N / 1
Bild / Fig. 1
Grenzdurchlaßkennlinie / Limiting on-state characteristics $i_T = f(v_T)$
 $t_{vj} = t_{vj \max}$