

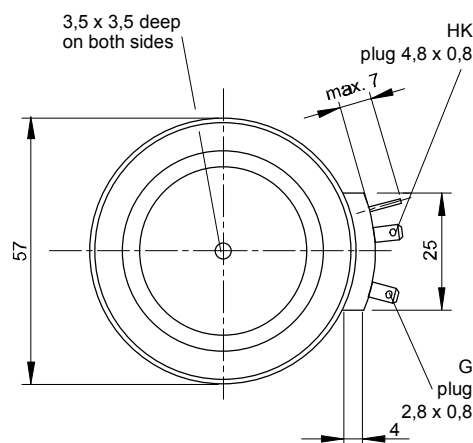
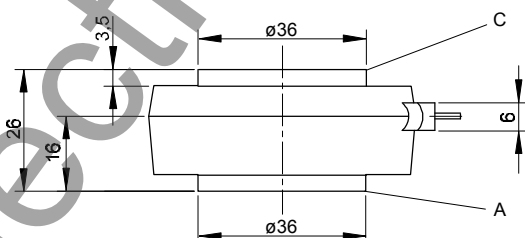
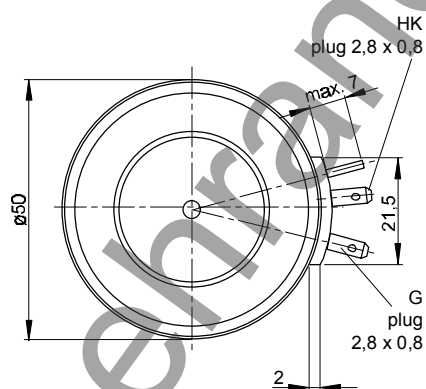
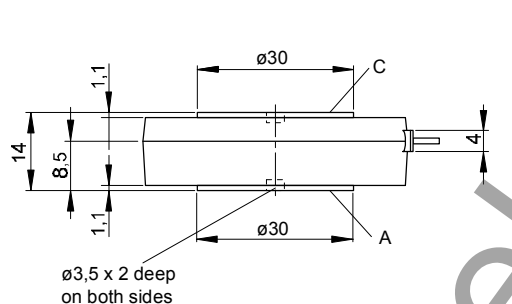


European Power-Semiconductor and Electronics Company

Marketing Information

T 618 N

T 619 N



T 618 / 619 N

Elektrische Eigenschaften

Höchstzulässige Werte

Periodische Vorwärts- und Rückwärts-Schnittsenserspannung

Vorwärts-Stoßspitzensperrspannung

Rückwärts-Stoßspitzensperrspannung

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

$I^2 t$ -value

critical rate of rise of on-state current

critical rate of rise of off-state voltage

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

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

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

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

$t_c = 67^\circ\text{C}$

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

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

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

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

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 F

V_{DRM}, V_{RRM} 600 800 1000 1200 V

V_{DSM} 600 800 1000 1200 V

V_{RSM} 700 900 1100 1300 V

I_{TRMSM} 1500 A

I_{TAVM} 618 A

I_{TSM} 11000 A

$I^2 t$ 9500 A

605000 A²s

451000 A²s

$(di_T/dt)_{cr}$ 200 A/ μs

$(dv_D/dt)_{cr}$ 1000 V/ μs

Charakteristische Werte

Durchlaßspannung

Schleusenspannung

Ersatzwiderstand

Zündstrom

Zündspannung

Nicht zündender Steuerstrom

Nicht zündende Steuerspannung

Haltestrom

Einraststrom

Vorwärts- und Rückwärts-Sperrstrom

Zündverzug

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

$t_{vj} = t_{vj\text{ max}}, i_T = 2000\text{ A}$

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

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

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

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

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

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

$t_{vj} = 25^\circ\text{C}, V_D = 6\text{ V}, R_A = 5\ \Omega$

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

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

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

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 max. 1,75 V

$V_{T(TO)}$ 0,8 V

r_T 0,42 m Ω

I_{GT} max. 250 mA

V_{GT} max. 2,2 V

I_{GD} max. 10 mA

V_{GD} max. 0,25 V

I_H max. 300 mA

I_L max. 1200 mA

i_D, i_R max. 50 mA

t_{gd} max. 4 μs

typ. 250 μs

Thermische Eigenschaften

Innerer Wärmewiderstand

Thermal properties

thermal resistance, junction to case

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}

max. 0,045 $^\circ\text{C}/\text{W}$

max. 0,041 $^\circ\text{C}/\text{W}$

max. 0,074 $^\circ\text{C}/\text{W}$

max. 0,070 $^\circ\text{C}/\text{W}$

max. 0,104 $^\circ\text{C}/\text{W}$

max. 0,100 $^\circ\text{C}/\text{W}$

Übergangs-Wärmewiderstand

thermal resistance, case to heatsink

R_{thCK}

max. 0,0075 $^\circ\text{C}/\text{W}$

max. 0,0150 $^\circ\text{C}/\text{W}$

Höchstzul.Sperrschichttemperatur

max. junction temperature

$t_{vj\text{ max}}$

125 $^\circ\text{C}$

Betriebstemperatur

operating temperature

$t_{c\text{ op}}$

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

Lagertemperatur

storage temperature

t_{stg}

-40...+140 $^\circ\text{C}$

Mechanische Eigenschaften

Si-Elemente mit Druckkontakt, Amplifying-Gate

Anpreßkraft

Gewicht

Kriechstrecke

Feuchteklasse

Schwingfestigkeit

Gehäuse

Mechanical properties

Si-pellet with pressure contact, amplifying-gate

clamping force

weight

creepage distance

humidity classification

vibration resistance

case

F

6...12 kN

G

typ. 120 g

17 mm

C

50 m/s²

Titelseite / front page

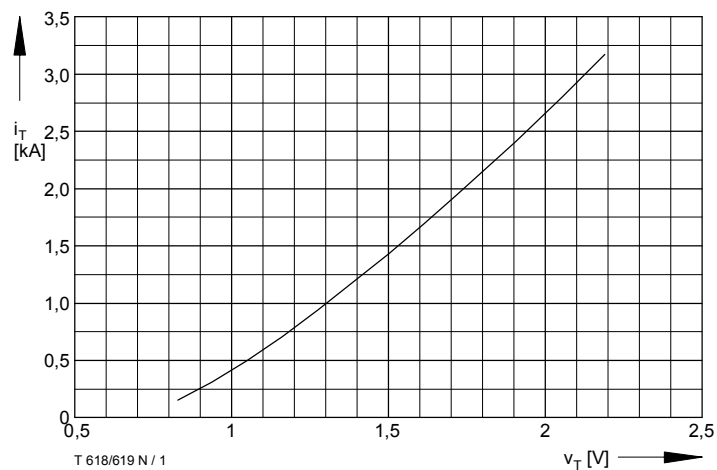


Bild / Fig. 1

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

Terms & Conditions of Usage

Attention

The present product data is exclusively subscribed to technically experienced staff. This Data Sheet is describing the specification of the products for which a warranty is granted exclusively pursuant the terms and conditions of the supply agreement. There will be no guarantee of any kind for the product and its specifications. Changes to the Data Sheet are reserved.

You and your technical departments will have to evaluate the suitability of the product for the intended application and the completeness of the product data with respect to such application. Should you require product information in excess of the data given in the Data Sheet, please contact your local Sales Office via "www.eupec.com / sales & contact".

Warning

Due to technical requirements the products may contain dangerous substances. For information on the types in question please contact your local Sales Office via "www.eupec.com / sales & contact".