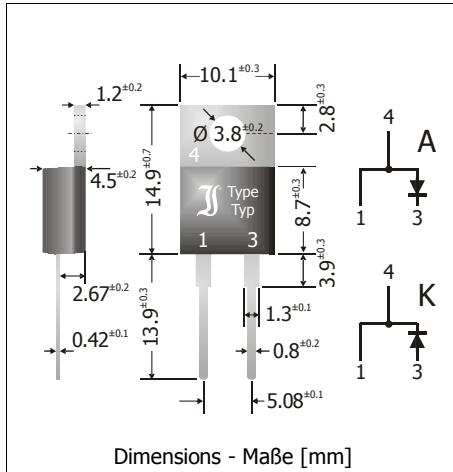


**KT20A120,KT20K150**

**Protectifiers® – LowV<sub>F</sub>-Rectifier with Overvoltage protection**  
**Protectifiers® – LowV<sub>F</sub>-Gleichrichter mit Überspannungs-Schutz**

Version 2013-05-07



|                                                                                       |             |
|---------------------------------------------------------------------------------------|-------------|
| Nominal current<br>Nennstrom                                                          | 20 A        |
| Stand off voltage<br>Sperrspannung                                                    | 120...150 V |
| Plastic case<br>Kunststoffgehäuse                                                     | TO-220AC    |
| Weight approx.<br>Gewicht ca.                                                         | 1.8 g       |
| Plastic material has UL classification 94V-0<br>Gehäusematerial UL94V-0 klassifiziert |             |
| Standard packaging in tubes<br>Standard Lieferform in Stangen                         |             |



**Low forward losses, high reverse pulse power capability**  
**Niedrige Durchlass-Verluste, hohe Rückwärts-Pulsbelastbarkeit**

**Maximum ratings and Characteristics (T<sub>J</sub> = 25°C)****Grenz- und Kennwerte (T<sub>J</sub> = 25°C)**

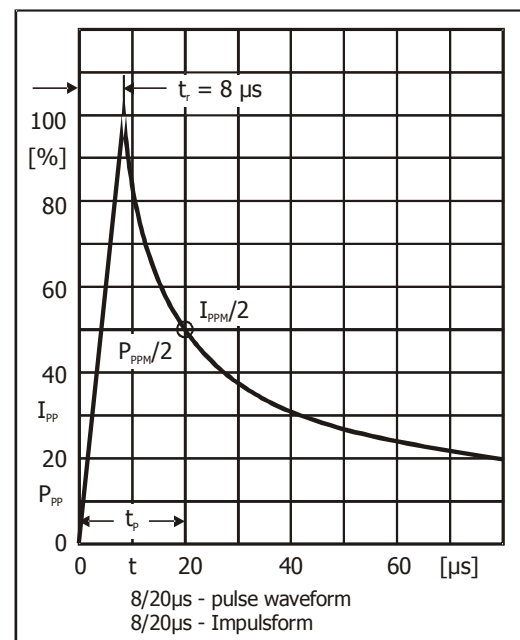
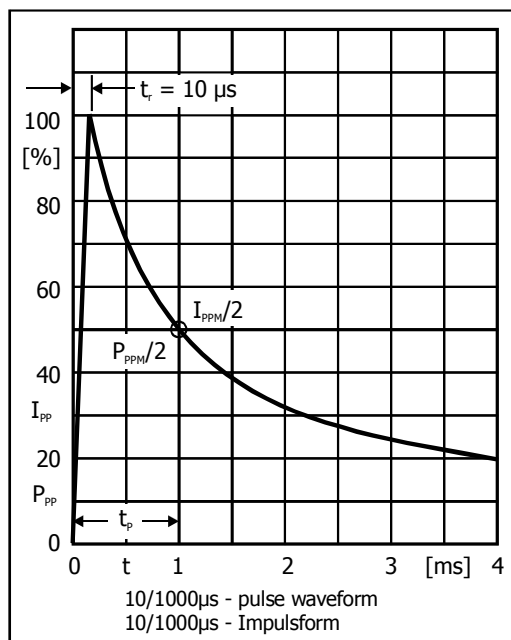
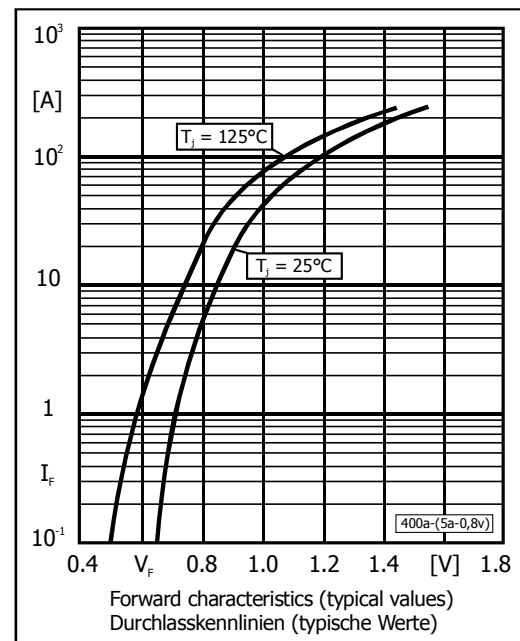
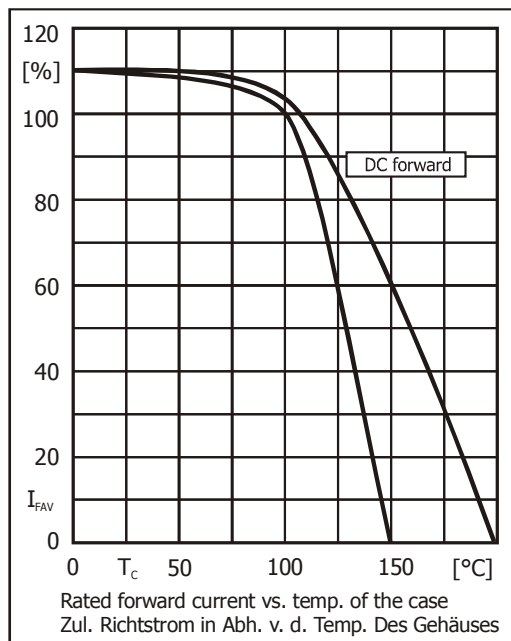
| Type / Typ           | Stand-off voltage<br>Sperrspannung | Max. rev. current<br>Max. Sperrstrom<br>at/bei V <sub>WM</sub> | Breakdown voltage<br>Abbruch-Spannung         | Forward voltage<br>Durchlass-Spannung<br>V <sub>F</sub> [V] <sup>1)</sup> |                      |
|----------------------|------------------------------------|----------------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------|----------------------|
| Polarity / Polarität | V <sub>WM</sub> [V]                | I <sub>D</sub> [μA]                                            | V <sub>BR</sub> min [V] @ I <sub>T</sub> [mA] | I <sub>F</sub> = 5A                                                       | I <sub>F</sub> = 20A |
| K (Standard)         | A (Reverse)                        |                                                                |                                               |                                                                           |                      |
| KT20K120             | KT20A120                           | 120                                                            | 5                                             | < 0.85                                                                    | < 0.98               |
| KT20K150             | KT20A150                           | 150                                                            | 5                                             | < 0.85                                                                    | < 0.98               |

|                                                                                                        |                        |                                  |                        |
|--------------------------------------------------------------------------------------------------------|------------------------|----------------------------------|------------------------|
| Max. average forward rectified current, R-load<br>Dauergrenzstrom in Einwegschaltung mit R-Last        | T <sub>C</sub> = 100°C | I <sub>FAV</sub>                 | 20 A                   |
| Total steady state power dissipation<br>Gesamtverlustleistung im Dauerbetrieb                          | T <sub>C</sub> = 100°C | P <sub>tot</sub>                 | 25 W                   |
| Repetitive peak forward current<br>Periodischer Spitzenstrom                                           | f > 15 Hz              | I <sub>FRM</sub>                 | 70 A <sup>1)</sup>     |
| Peak forward surge current, 50/60 Hz half sine-wave<br>Stoßstrom für eine 50/60 Hz Sinus-Halbwelle     | T <sub>A</sub> = 25°C  | I <sub>FSM</sub>                 | 350/385 A              |
| Rating for fusing, t < 10 ms<br>Grenzlastintegral, t < 10 ms                                           | T <sub>A</sub> = 25°C  | i <sup>2</sup> t                 | 612 A <sup>2</sup> s   |
| Junction temperature – Sperrschichttemperatur<br>in DC forward mode – bei Gleichstrom-Durchlassbetrieb |                        | T <sub>J</sub><br>T <sub>J</sub> | -50...+175°C<br>+200°C |
| Storage temperature – Lagerungstemperatur                                                              |                        | T <sub>S</sub>                   | -50...+175°C           |
| Thermal resistance junction to case – Wärmewiderstand Sperrschicht – Gehäuse                           |                        | R <sub>thC</sub>                 | < 1.5 K/W              |

1 T<sub>J</sub> = 25°C1 Max. temperature of the case T<sub>C</sub> = 100°C – Max. Temperatur des Gehäuses T<sub>C</sub> = 100°C

**Characteristics**
**Kennwerte**

|                                                                                                                |                                                                                  |                          |           |                   |
|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|--------------------------|-----------|-------------------|
| Leakage current – Sperrstrom                                                                                   | $T_j = 25^\circ\text{C}$                                                         | $V_R = V_{WM}$           | $I_R$     | < 5 $\mu\text{A}$ |
| ESD rating according to JESD22-A114 / contact discharge<br>ESD-Festigkeit gemäß JESD22-A114 / Kontaktentladung | $C = 100\text{pF}$                                                               | $R = 1.5\text{k}\Omega$  |           | 20 kV             |
| Peak pulse power dissipation<br>Impuls-Verlustleistung                                                         | 10/1000 $\mu\text{s}$ pulse <sup>1)</sup>                                        | $T_A = 25^\circ\text{C}$ | $P_{PPM}$ | 750 W             |
| Max. reverse peak pulse current<br>Max. Impuls-Strom in Sperr-Richtung                                         | 8/20 $\mu\text{s}$ pulse <sup>2)</sup>                                           | $T_A = 25^\circ\text{C}$ | $I_{PPM}$ | 200 A             |
| Reverse recovery time<br>Sperrverzögerung                                                                      | $I_F = 0.5\text{ A}$ through/über<br>$I_R = 1\text{ A}$ to $I_R = 0.25\text{ A}$ |                          | $t_{rr}$  | < 300 ns          |



1 See curve  $I_{PP} = f(t)$  10/1000 $\mu\text{s}$  – Siehe Kurve  $I_{PP} = f(t)$  10/1000 $\mu\text{s}$

2 See curve  $I_{PP} = f(t)$  8/20 $\mu\text{s}$  – Siehe Kurve  $I_{PP} = f(t)$  8/20 $\mu\text{s}$