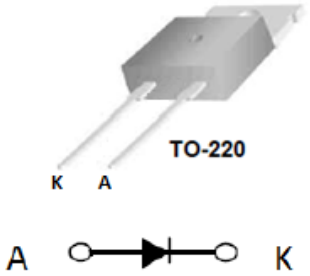
# Ultrafast Soft Recovery Diode
# 10A 400V trr ~ 22 ns

**Features**

Ultrafast Recovery

175℃ operating junction temperature

Designed and qualified for industrial level




**Benefits**

Reduced RFI and EMI

Higher frequency operation

Reduced snubbing

Reduced part count

**Description/Applications**

These diodes are optimized to reduce losses and EMI/RFI in high frequency power conditioning system. The softness of the recovery eliminates the need for a snubber in most applications.

These devices are ideally suited for HF welding power converters and other applications where switching losses are not significant portion of the total losses.

## Absolute Maximum Ratings $T_C$ = 25 ℃ unless otherwise noted

| Symbol | Parameter | Test Condition | Values | Units |
|---|---|---|---|---|
| $V_R$ | Cathode – Anode voltage | -- | 400 | V |
| $I_{F(AV)}$ | Continuous forward current | $T_C$ = 25 ℃ | 10 | A |
| $I_{FSM}$ | Single pulse forward current | $T_C$ = 25 ℃ | 100 | A |
| $T_J$,$T_{STG}$ | Operating and Storage Temperature Range | -- | -55 to +175 | ℃ |

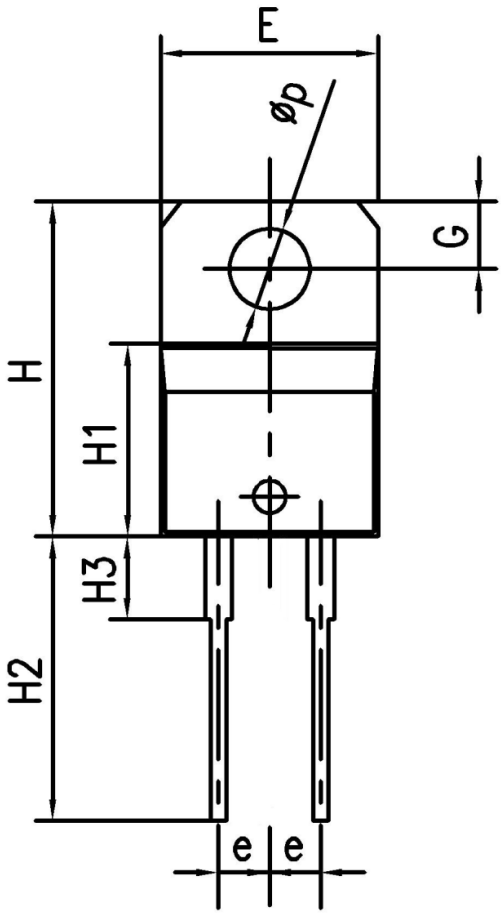
## Thermal characteristics

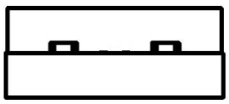
| Symbol | Parameter | Values | Units |
|---|---|---|---|
| $R_{\theta JC}$ | Thermal Resistance, Junction-to-Case | 2.6 | ℃/W |

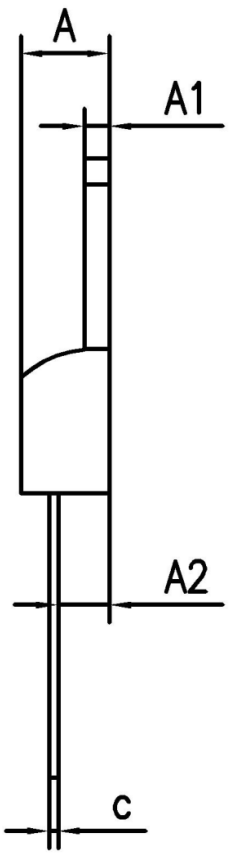
## Electrical Characteristics $T_J$ = 25 ℃ unless otherwise noted

| Symbol | Parameter | Test Conditions | Min | Typ | Max | Units |
|---|---|---|---|---|---|---|
| $V_{BR}$, $V_R$ | Breakdown Voltage, Blocking Voltage | $I_R$ = 100 uA | 400 | -- | -- | V |
| $V_F$ | Forward voltage | $I_F$ = 10 A, $T_J$ = 25 ℃ | -- | 1.2 | 1.6 | V |
| | | $I_F$ = 10 A, $T_J$ = 125 ℃ | -- | 1.1 | 1.5 | V |
| $I_R$ | Reverse Leakage Current | $V_R$ = $V_R$ rated | -- | -- | 2 | uA |
| | | $V_R$ = $V_R$ rated, $T_J$ = 120 ℃ | -- | 2 | | uA |
| trr | Reverse recovery time | $I_F$ = 0.5A, $I_R$ = 1A, $I_{RR}$ = 0.25A | -- | 22 | 30 | ns |
| | | $I_F$ = 1A,$V_R$ = 30V, di/dt =-200A/us | -- | 22 | | ns |

## Package Information






| | 单位 mm | | |
|---|---|---|---|
| | MIN | NOM | MAX |
| A | 4.05 | 4.25 | 4.45 |
| A1 | 1.15 | 1.25 | 1.35 |
| A2 | 2.35 | 2.55 | 2.75 |
| b | 0.7 | 0.8 | 0.9 |
| b1 | 1.22 | 1.32 | 1.42 |
| c | 0.4 | 0.45 | 0.5 |
| e | 2.34 | 2.54 | 2.74 |
| E | 9.95 | 10.15 | 10.35 |
| H | 15.3 | 15.5 | 15.7 |
| H1 | 8.8 | 9 | 9.2 |
| H2 | 13 | 13.5 | 14 |
| H3 | 3.8 | 4 | 4.2 |
| G | 2.6 | 2.8 | 3 |
| P | 3.7 | 3.8 | 3.9 |