

KD3SF60E

TRIACs
600V, 3A

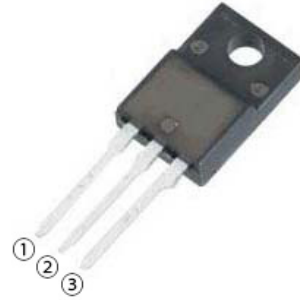
Feature

- Full molded
- High voltage
- High sensitivity
- $T_j=150^{\circ}\text{C}$
- Stable surge-on current capability
- Pb free terminal
- RoHS:Yes
- UL E142422

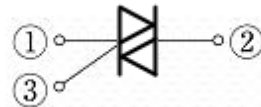
OUTLINE

Package (House Name): FTO-220AG

Package (JEITA Code): SC-91



Equivalent circuit



Absolute Maximum Ratings (unless otherwise specified : Tc=25°C)

| Item | Symbol | Conditions | Ratings | Unit |
|---|---------------------|--|------------|------------------|
| Storage temperature | Tstg | | -55 to 150 | °C |
| Junction temperature | Tj | | -40 to 150 | °C |
| Repetitive peak off-state voltage | V _{DRM} | | 600 | V |
| Non-repetitive peak off-state voltage | V _{DSM} | ※ | 720 | V |
| R.M.S. on-state current | I _{T(RMS)} | Tc=136°C, commercial frequency, sine wave, θ=360°C | 3 | A |
| Surge on-state current | I _{TSM} | Tj=25°C, 60Hz sine wave, Non-repetive 1 cycle peak ※ | 30 | A |
| Current squared time | I ² t | Tj=25°C, t=8.33ms, Non-repetitive ※ | 3.7 | A ² S |
| Critical rate of rise of on-state current | di/dt | | 50 | A/μs |
| Peak gate dissipation | P _{GM} | f=60Hz, Duty≤10% | 5 | W |
| Average gate dissipation | P _{G(AV)} | | 0.5 | W |
| Peak gate current | I _{GM} | f=60Hz, Duty≤10% | 2 | A |
| Peak gate voltage | V _{GM} | | 10 | V |
| Dielectric strength | V _{dis} | Terminals to case, AC 1 minute | 2 | kV |
| Mounting Torque | TOR | (Recommended torque:0.3N·m) | 0.5 | N·m |

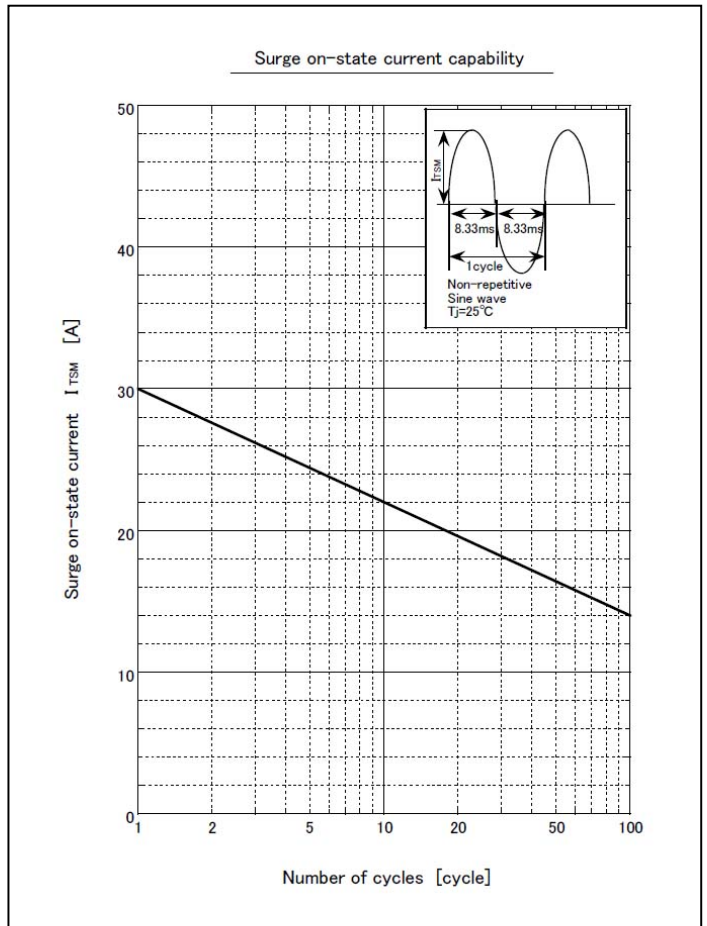
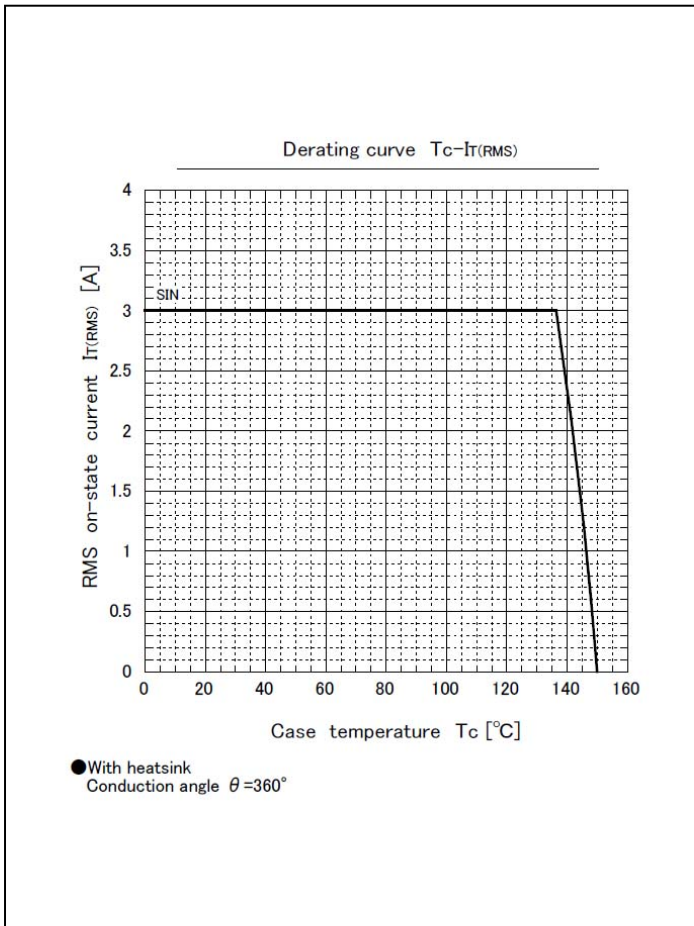
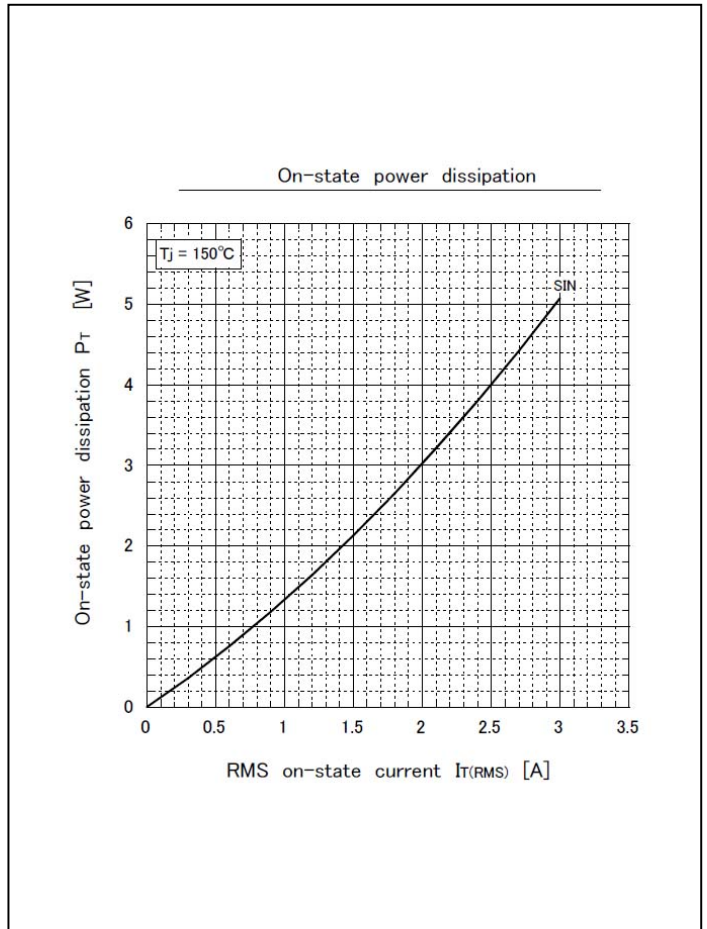
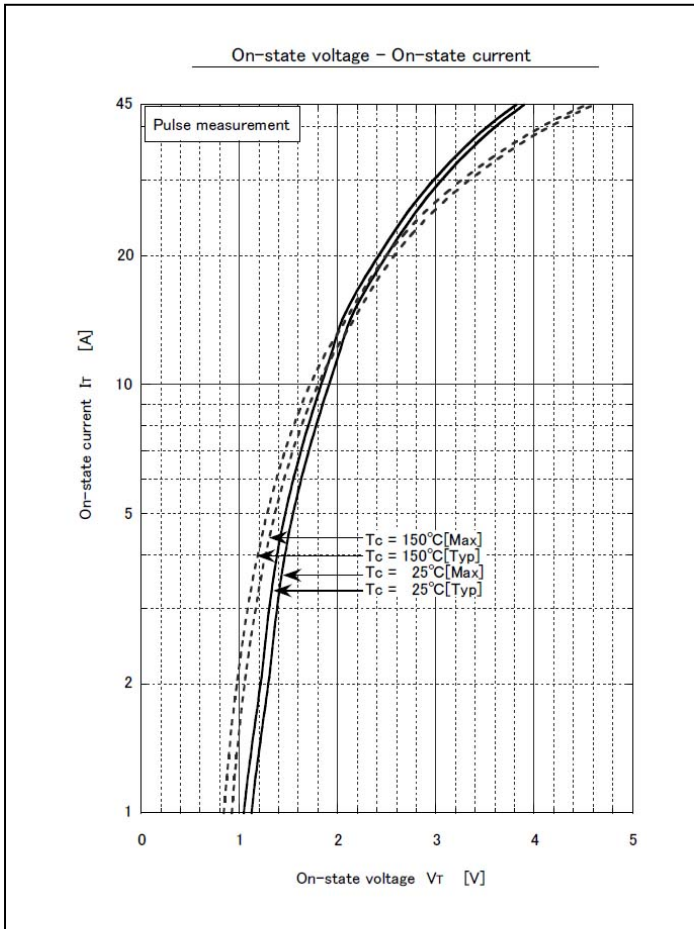
※ : See the original Specifications

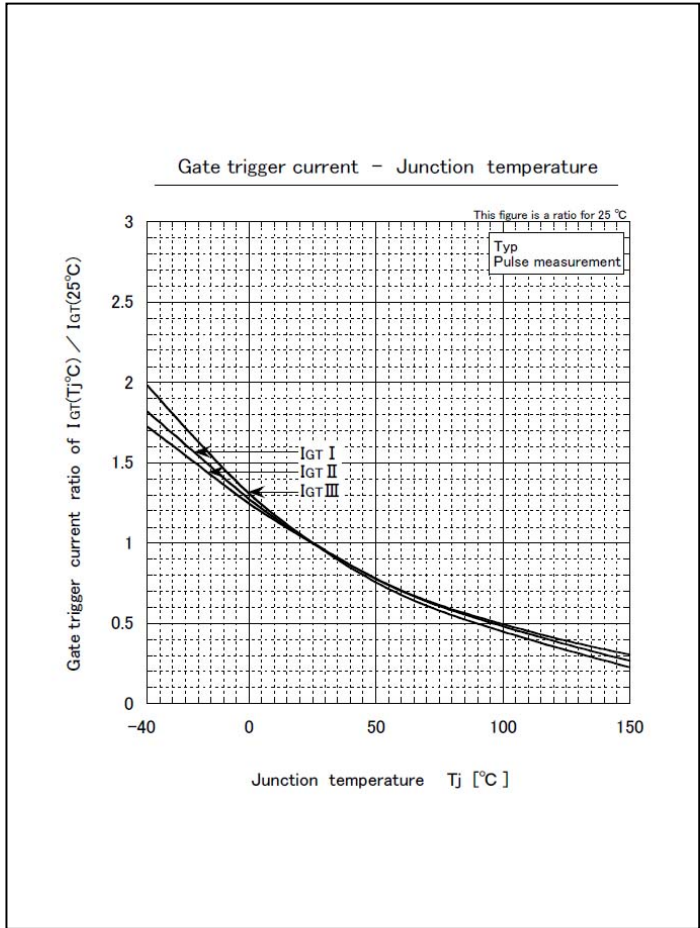
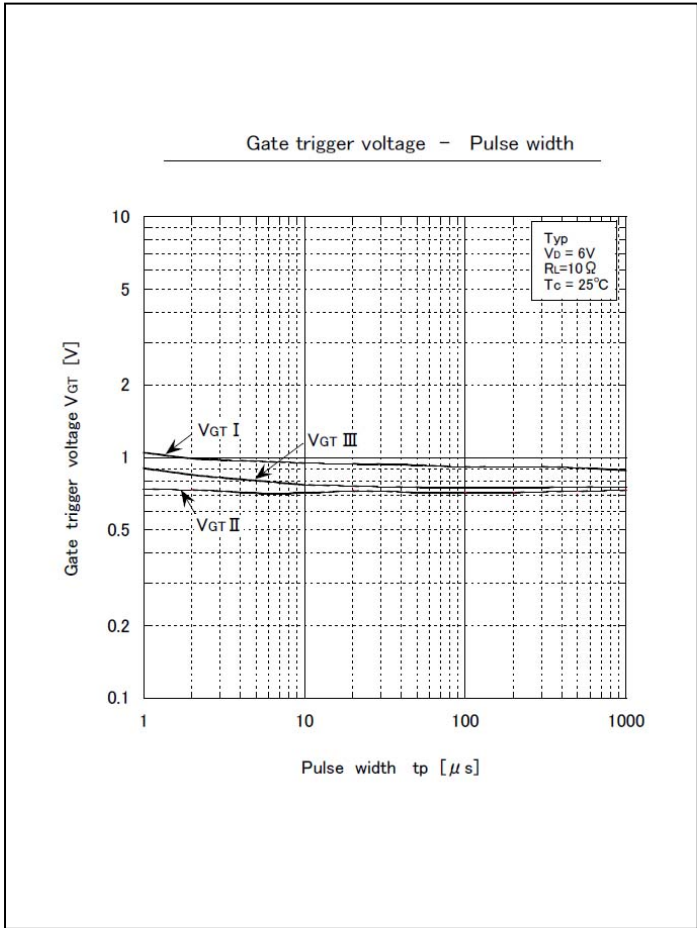
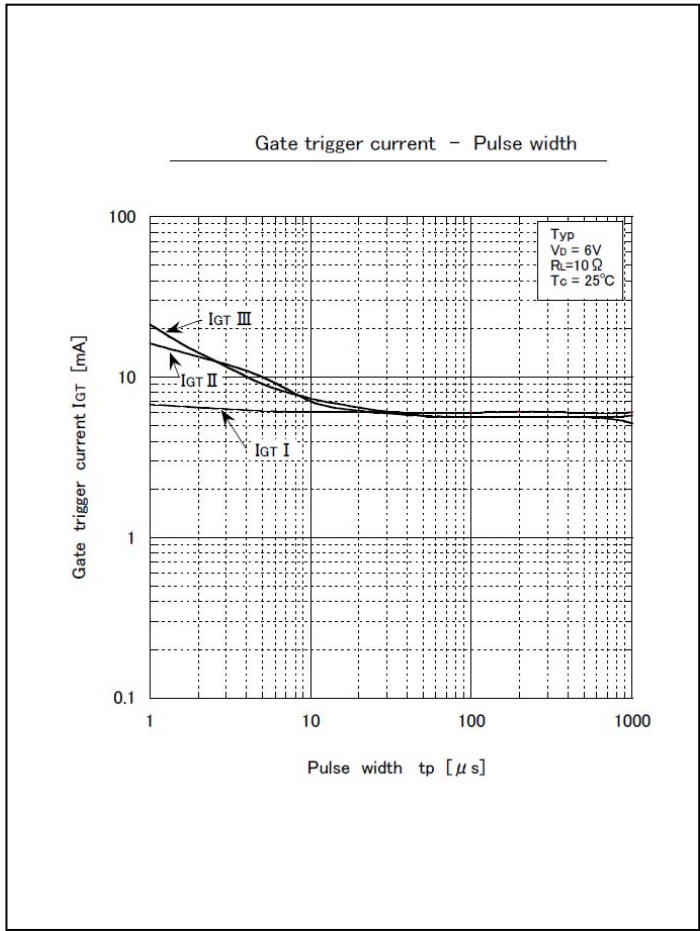
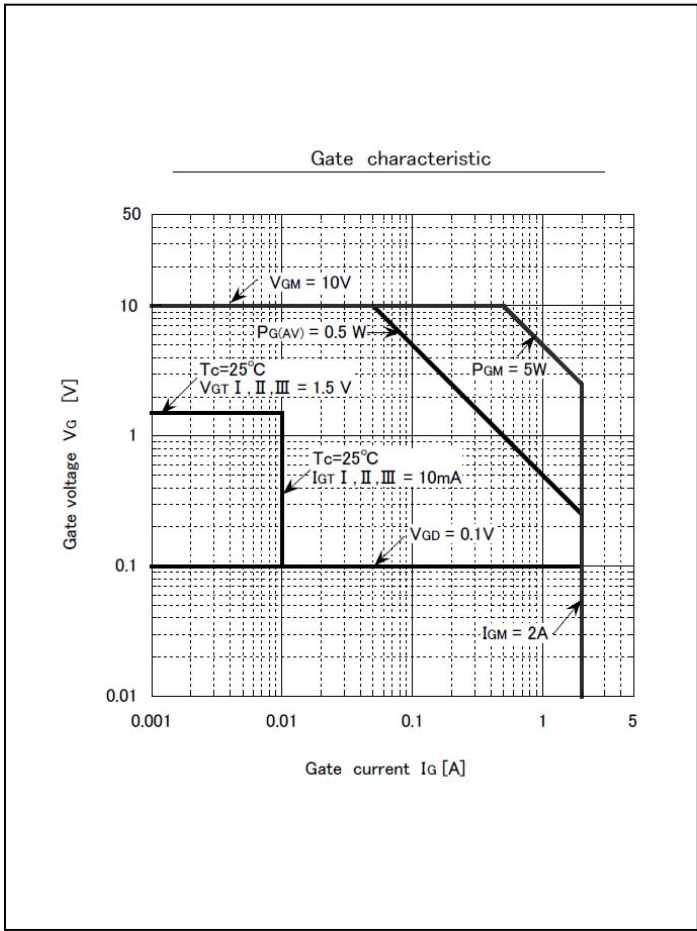
Electrical Characteristics (unless otherwise specified : Tc=25°C)

| Item | Symbol | Conditions | Ratings | | | Unit |
|--------------------------|--------------|--------------------------------------|---------|-----|------|---------|
| | | | MIN | TYP | MAX | |
| Off-state current | I_{DRM} | VD=600V, Pulse measurement | | | 10 | μA |
| On-state voltage | V_{TM} | ITM=4.5A, Pulse measurement | | | 1.5 | V |
| Gate trigger voltage | $V_{GT I}$ | VD=6V, RL=10 Ω , T1-, T2+, G+ | | | 1.5 | V |
| Gate trigger voltage | $V_{GT II}$ | VD=6V, RL=10 Ω , T1-, T2+, G- | | | 1.5 | V |
| Gate trigger voltage | $V_{GT III}$ | VD=6V, RL=10 Ω , T1+, T2-, G- | | | 1.5 | V |
| Gate trigger voltage | $V_{GT IV}$ | VD=6V, RL=10 Ω , T1+, T2-, G+ | | | - ※ | V |
| Gate non-trigger voltage | V_{GD} | Tj=150°C, VD=1/2VDRM | 0.1 | | | V |
| Gate trigger current | $I_{GT I}$ | VD=6V, RL=10 Ω , T1-, T2+, G+ | | | 10 | mA |
| Gate trigger current | $I_{GT II}$ | VD=6V, RL=10 Ω , T1-, T2+, G- | | | 10 | mA |
| Gate trigger current | $I_{GT III}$ | VD=6V, RL=10 Ω , T1+, T2-, G- | | | 10 | mA |
| Gate trigger current | $I_{GT IV}$ | VD=6V, RL=10 Ω , T1+, T2-, G+ | | | - ※ | mA |
| Latching current | $I_{L I}$ | IG=0.1A, T1-, T2+, G+ | | | 100 | mA |
| Latching current | $I_{L II}$ | IG=0.1A, T1-, T2+, G- | | | 100 | mA |
| Latching current | $I_{L III}$ | IG=0.1A, T1+, T2-, G- | | | 100 | mA |
| Latching current | $I_{L IV}$ | IG=0.1A, T1+, T2-, G+ | | | - ※ | mA |
| Holding current | I_H | IT=1A | | | 100 | mA |
| Thermal resistance | Rth(j-c) | Junction to case with heatsink | | | 2.62 | °C/W |

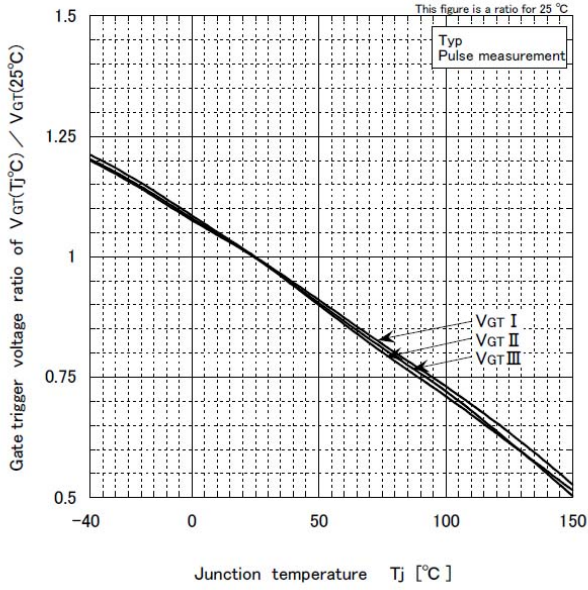
※ : See the original Specifications

CHARACTERISTIC DIAGRAMS

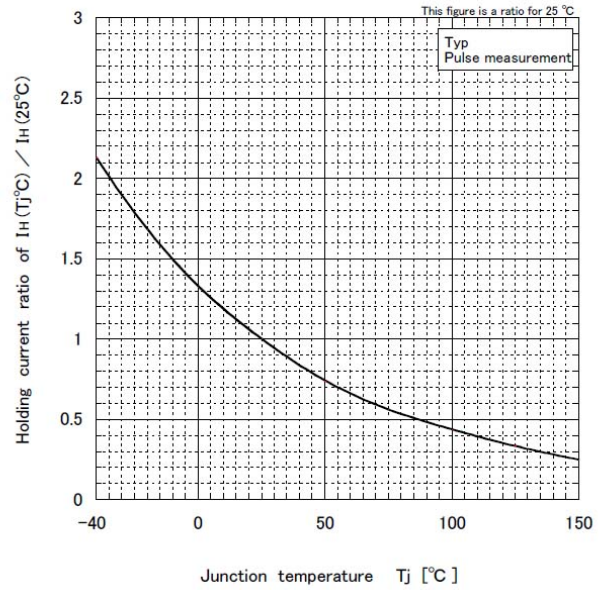




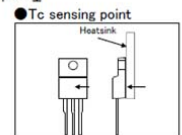
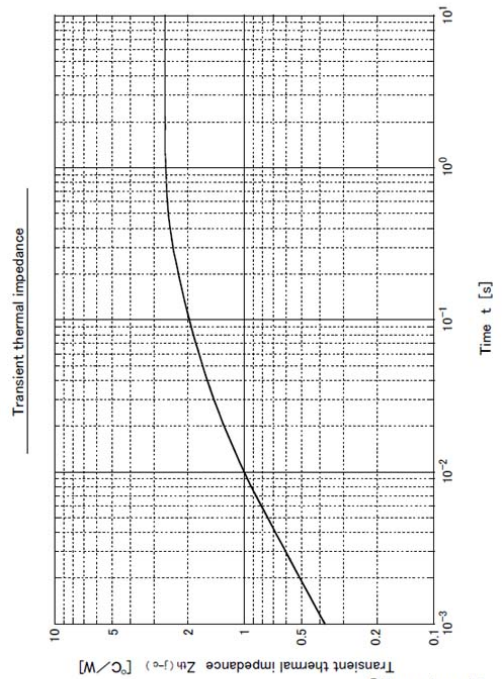
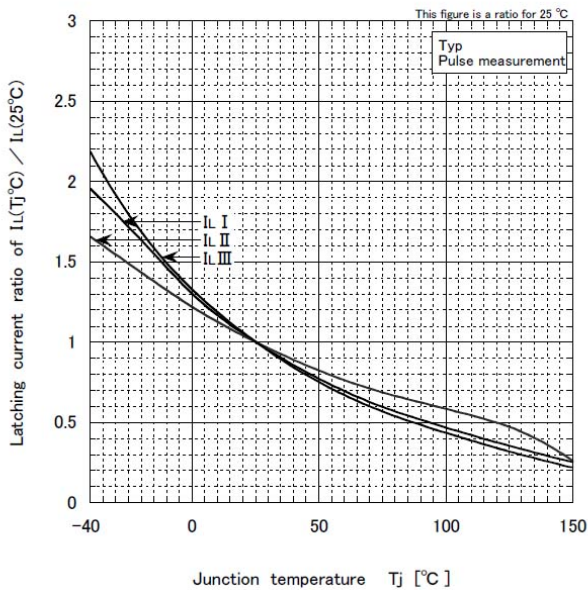
Gate trigger voltage - Junction temperature



Holding current - Junction temperature

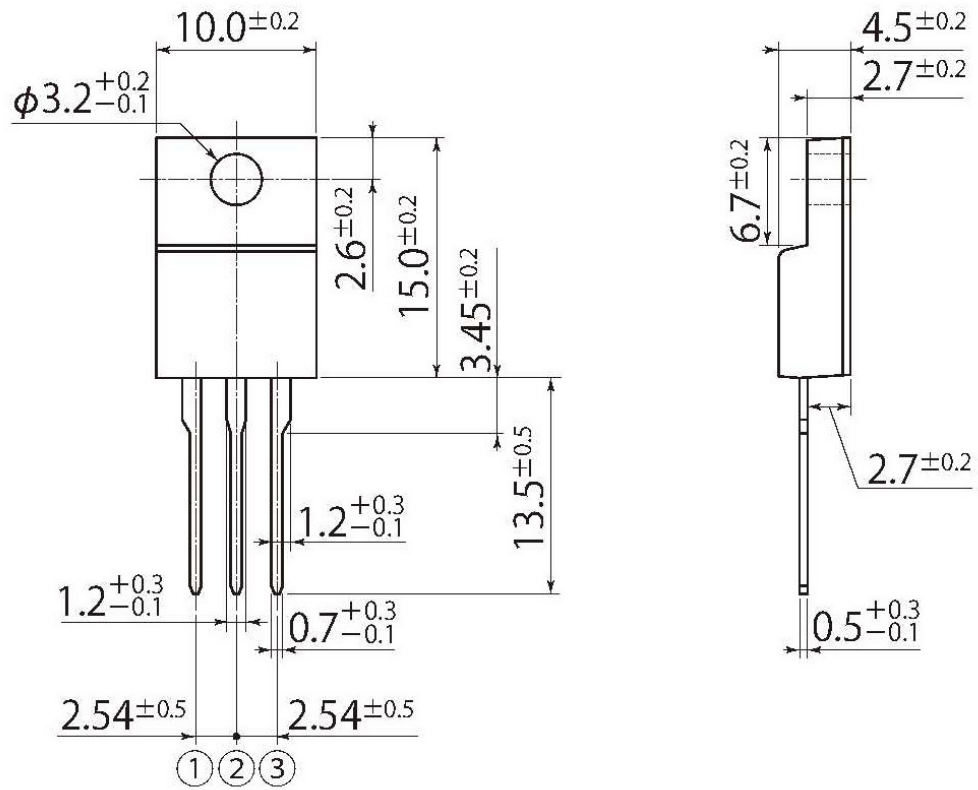


Latching current - Junction temperature



J8

| | |
|------------|-----------------|
| JEDEC Code | - |
| JEITA Code | SC-91 |
| House Name | FTO-220AG(3pin) |



Notes

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