

KC5FB60HR

Thyristors
600V, 5A

Feature

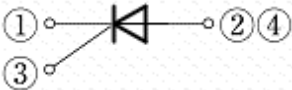
- Small SMD
- High Voltage
- High Sensitivity
- Suitable for an Inrush Current Protection Circuit
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): FB
Package (JEDEC Code): TO-252AA



Equivalent circuit



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

| Item | Symbol | Conditions | Ratings | Unit |
|---|---------------------|---|------------|------------------|
| Storage temperrature | T _{stg} | | -40 to 125 | °C |
| Junction temperature | T _j | | 125 | °C |
| Repetitive peak off-state voltage | V _{DRM} | RGK=220Ω | 600 | V |
| Repetitive peak reverse voltage | V _{RRM} | (not guaranteed) | - | V |
| Average on-state Current | I _{T(AV)} | Tc=98°C, 60Hz sine wave, θ=180° | 5 | A |
| Peak surge on-state current | I _{TSM} | Tj=25°C, 60Hz sine wave, θ=180°, Non repetitive | 90 | A |
| Current squared time | I ² t | Tj=25°C, tp=8.3ms, Non repetitive | 33.6 | A ² s |
| Peak gate dissipation | P _{FGM} | f≥60Hz, Duty≤10% | 2 | W |
| Average gate dissipation | P _{FG(AV)} | | 0.2 | W |
| Peak gate forward current | I _{FGM} | f=60Hz, Duty≤10% | 0.3 | A |
| Peak gate reverse voltage | V _{RGM} | | 6 | V |
| Critical rate of rise of on-state current | di/dt | | 50 | A/μs |

※ :See the original Specifications

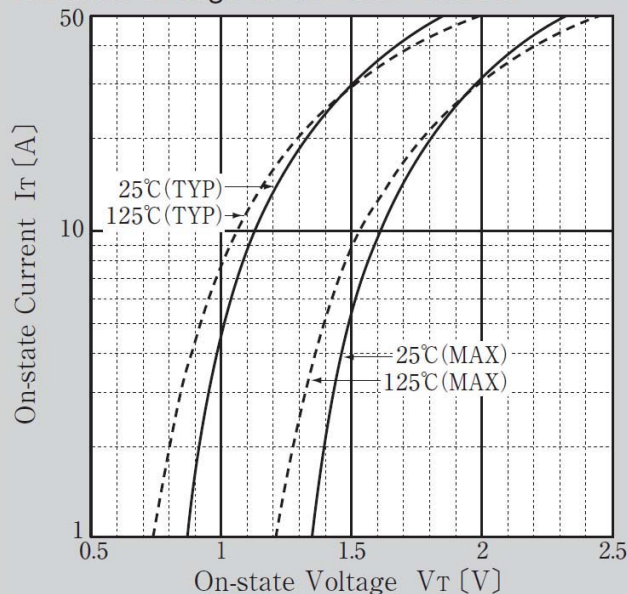
Electrical Characteristics (unless otherwise specified : Tc=25°C)

| Item | Symbol | Conditions | Ratings | | | Unit |
|------------------------------|-----------|--------------------------------------|---------|-----|-----|------|
| | | | MIN | TYP | MAX | |
| Repetitive off-state current | I_{DRM} | VD=600V, RGK=220Ω, Pulse measurement | | | 10 | μA |
| On-state voltage | V_T | IT=15A | | | 1.8 | V |
| Gate trigger voltage | V_{GT} | VD=6V, RL=100Ω | | | 0.8 | V |
| Gate trigger current | I_{GT} | VD=6V, RL=100Ω | 1 | | 100 | μA |
| Gate non-trigger voltage | V_{GD} | Tj=125°C, VD=1/2VDRM, RGK=220Ω | 0.1 | | | V |
| Holding Current | I_H | IT=100mA, RGK=220Ω | 0.2 | | 5 | mA |
| Thermal Resistance | Rth(j-c) | Junction to case | | | 3 | °C/W |

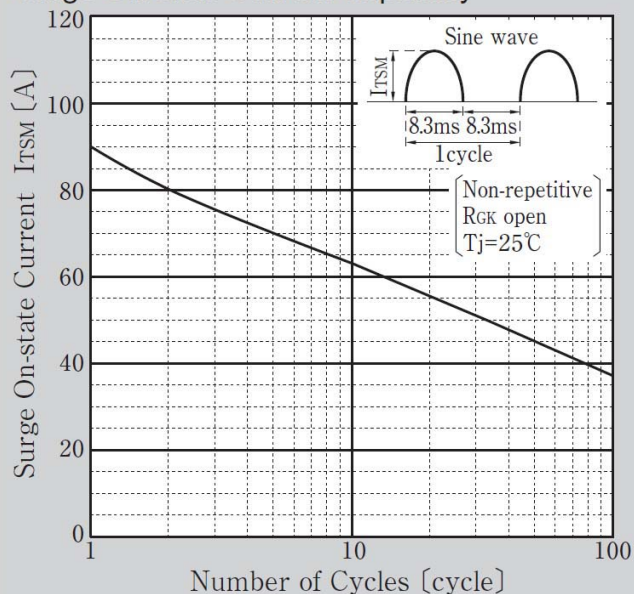
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

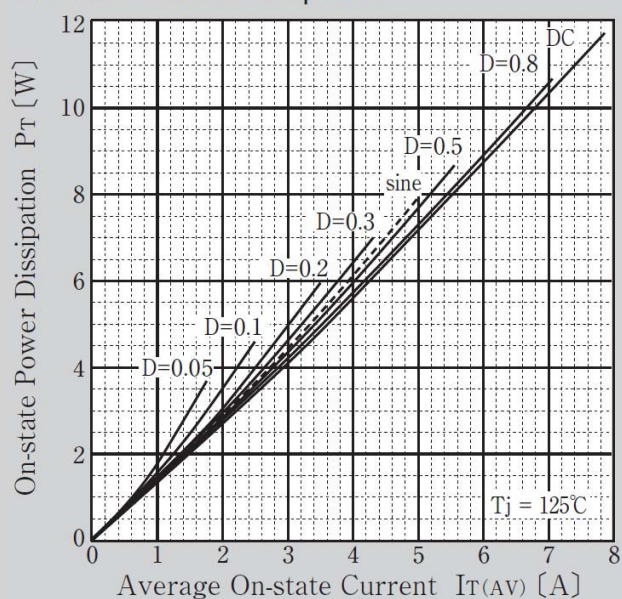
On-state Voltage vs On-state Current



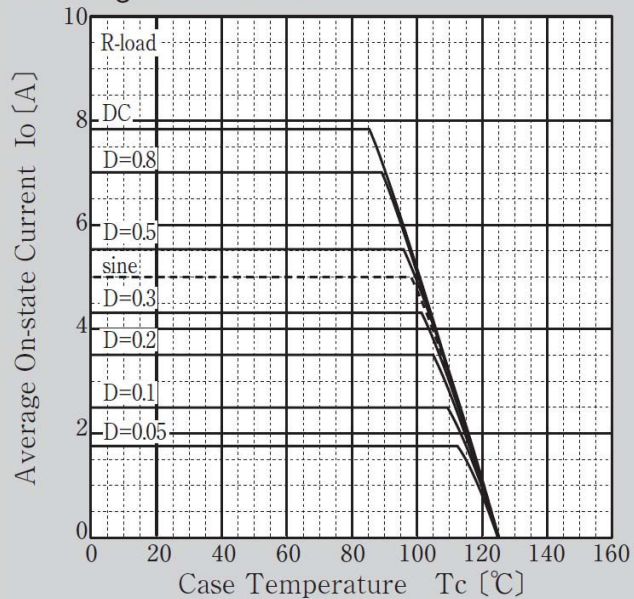
Surge On-state Current Capability

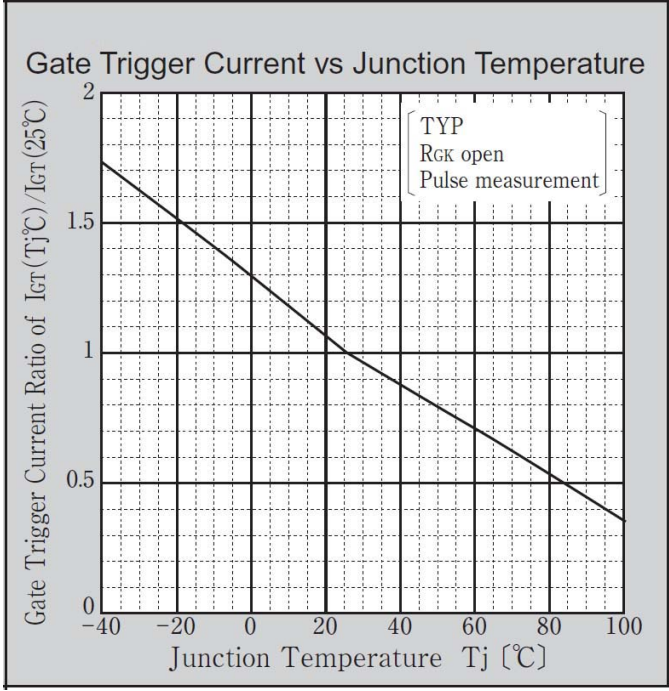
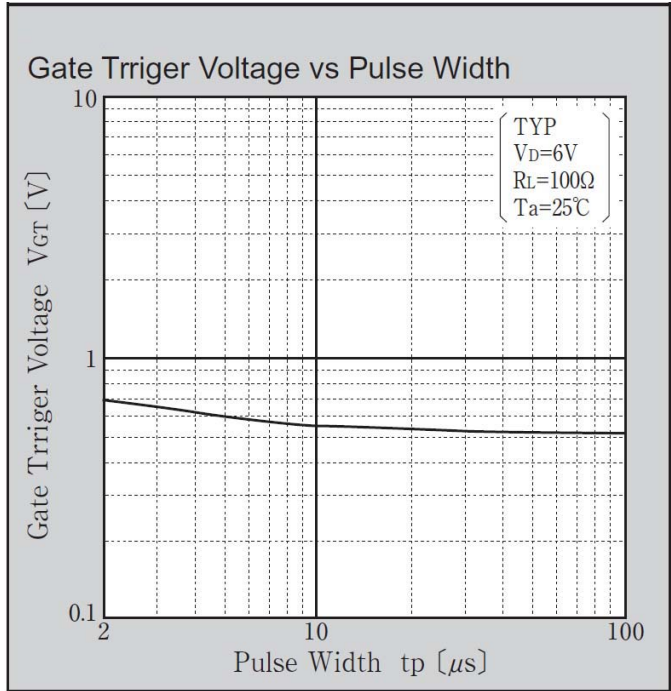
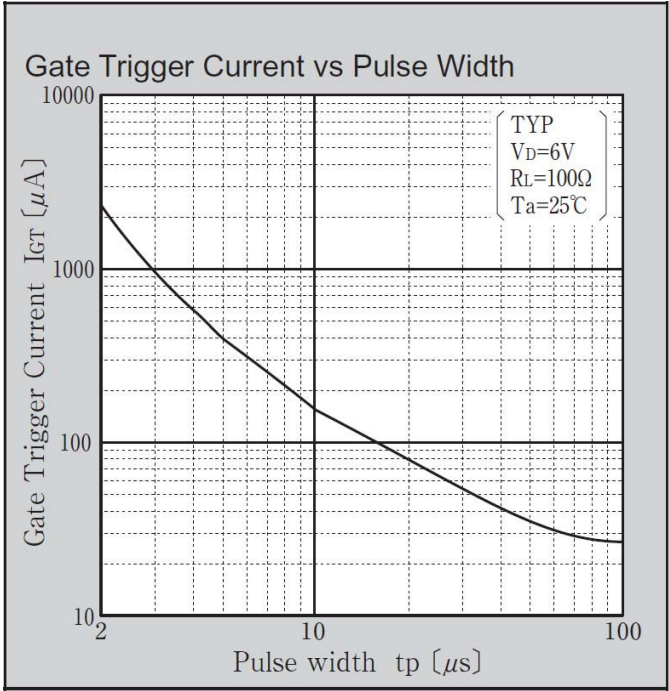
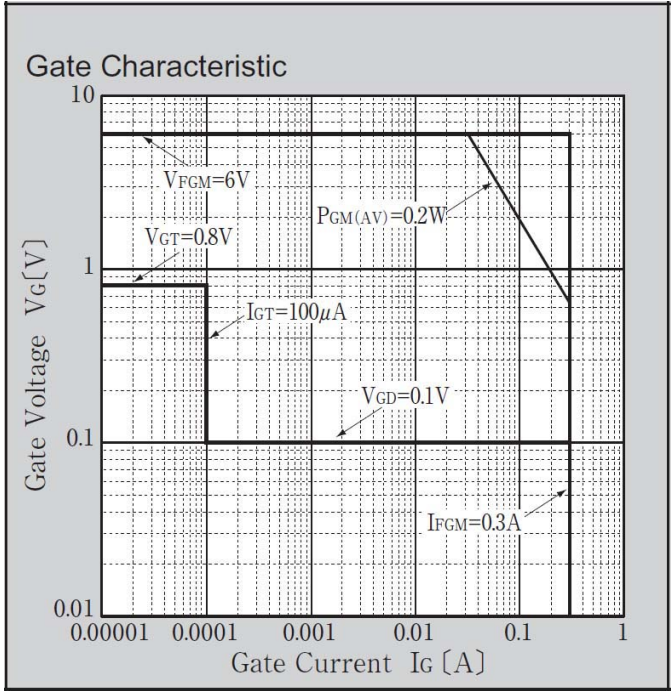


On-state Power Dissipation

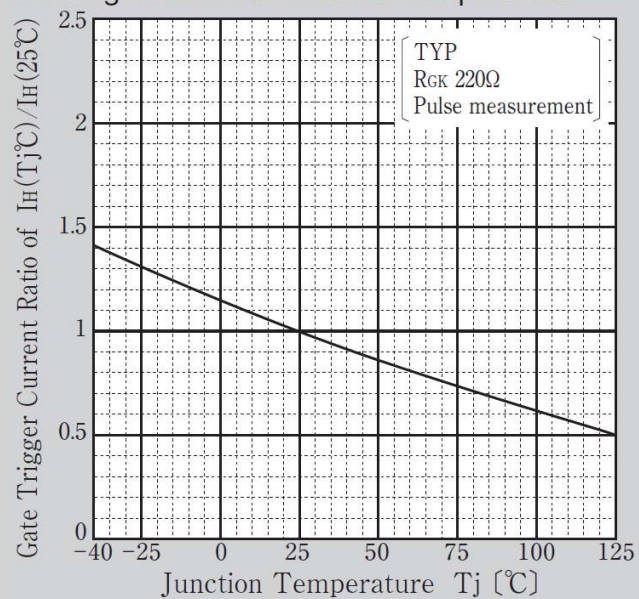


Derating Curve T_c-I_{T(AV)}

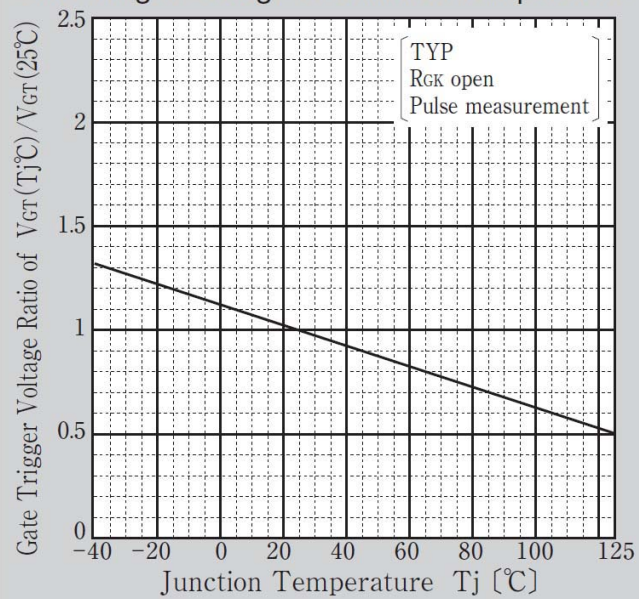




Holding Current vs Junction Temperature

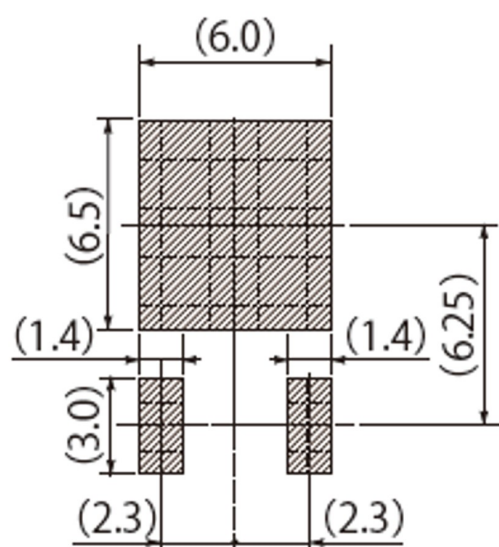
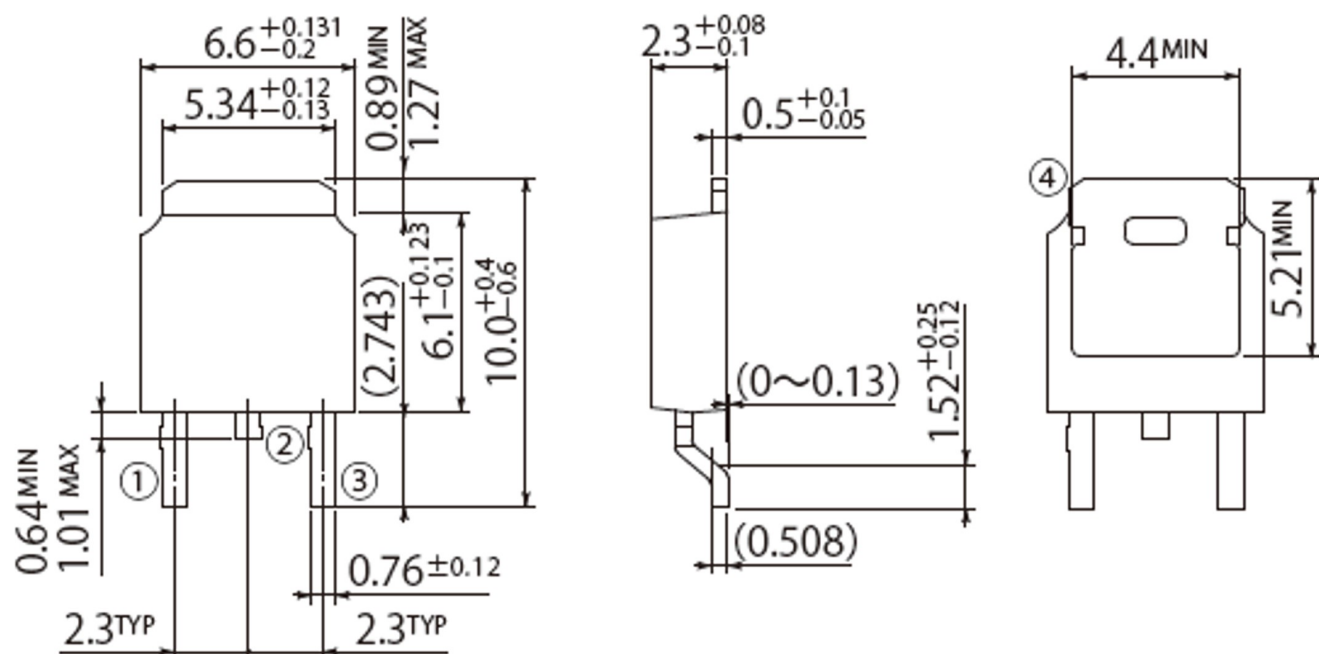


Gate Trriger Voltage vs Junction Temperature



G2

| | |
|------------|----------|
| JEDEC Code | TO-252AA |
| JEITA Code | — |
| House Name | FB |



Referential Soldering Pad

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