

S30K100V

Fast Recovery Diodes

1000V, 30A

Feature

- High Voltage
- Low Noise
- Available for automotive use
- Pb free terminal
- RoHS:Yes

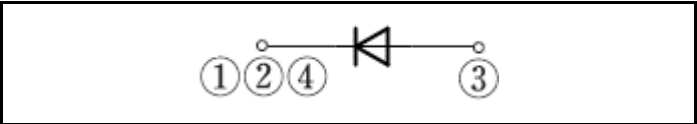
OUTLINE

Package (House Name): MTO-3PV

Package (JEDEC Code): TO-247AD



Equivalent circuit



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

| Item | Symbol | Conditions | Ratings | Unit |
|---------------------------------|--------|-----------------------------------------------------------------|------------|------|
| Storage temperrature | Tstg | | -55 to 150 | °C |
| Junction temperature | Tj | | 150 | °C |
| Repetitive peak reverse voltage | VRRM | | 1000 | V |
| Average forward current | IF(AV) | 50Hz sine wave, Resistance load, Tc=116°C | 30 | A |
| Surge forward current | IFSM | 50Hz sine wave, Non-repetitive 1 cycle, Peak value, Tj=25°C | 600 | A |
| Surge forward current | IFSM1 | tp=1ms, Sine wave, Non-repetitive, 1 cycle, Peak value, Tj=25°C | 1480 | A |
| Mounting torque | TOR | (Recommended torque : 0.5N・m) | 0.8 | N・m |

※ :See the original Specifications

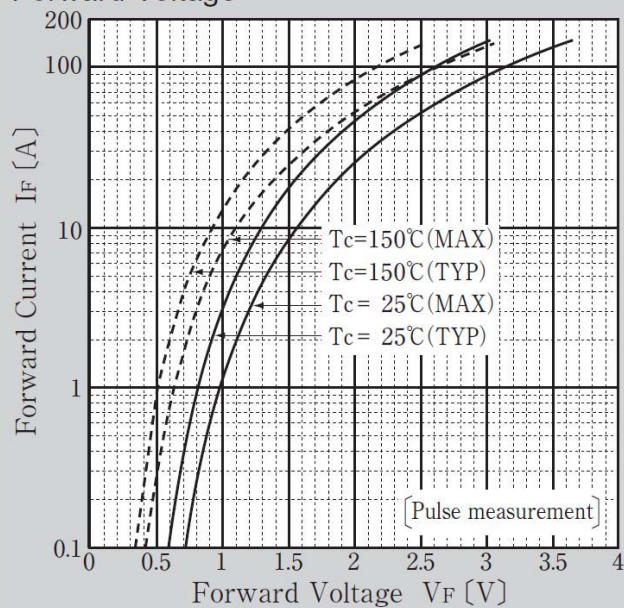
Electrical Characteristics (unless otherwise specified : Tc=25°C)

| Item | Symbol | Conditions | Ratings | | | Unit |
|-----------------------|----------|-----------------------------|---------|-----|-----|------|
| | | | MIN | TYP | MAX | |
| Forward voltage | V_F | IF=30A, Pulse measurement | | | 2.1 | V |
| Reverse current | I_R | VR=1000V, Pulse measurement | | | 10 | μA |
| Reverse recovery time | trr | IF=0.5A, IR=1.0A, 0.25IR | | | 120 | ns |
| Total capacitance | Ct | f=1MHz, VR=10V | | 150 | | pF |
| Thermal resistance | Rth(j-c) | Junction to case | | | 0.5 | °C/W |

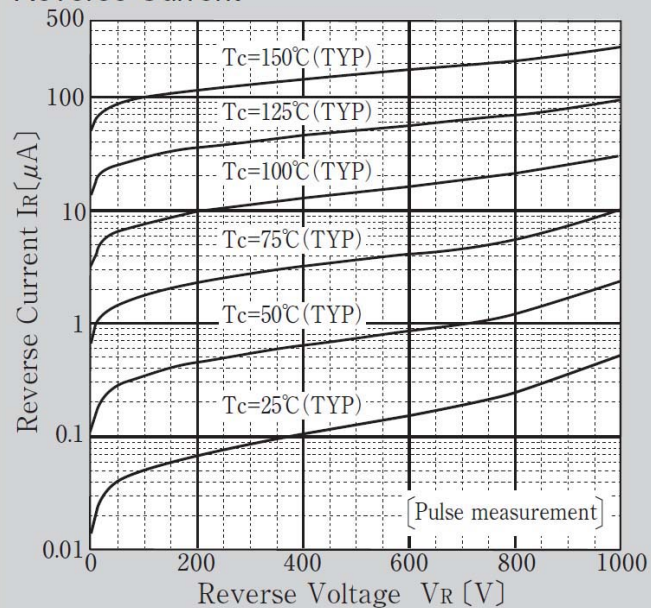
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

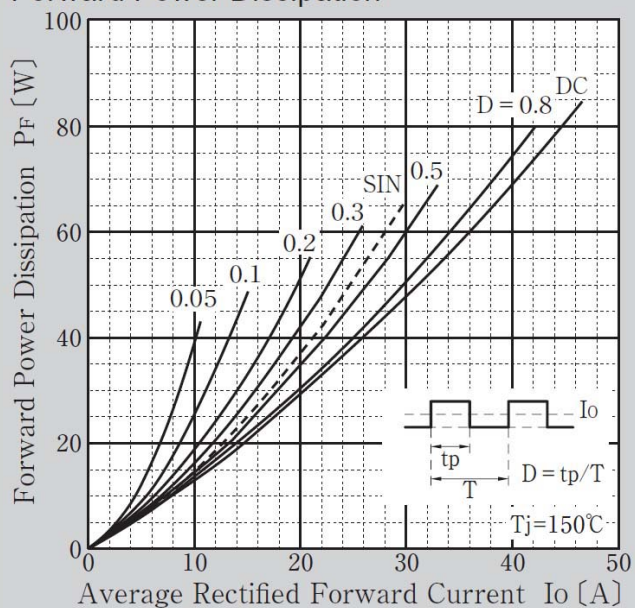
Forward Voltage



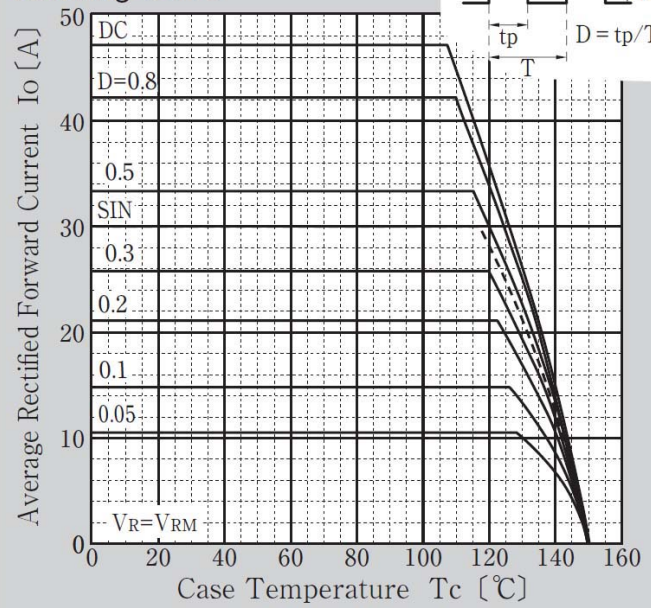
Reverse Current



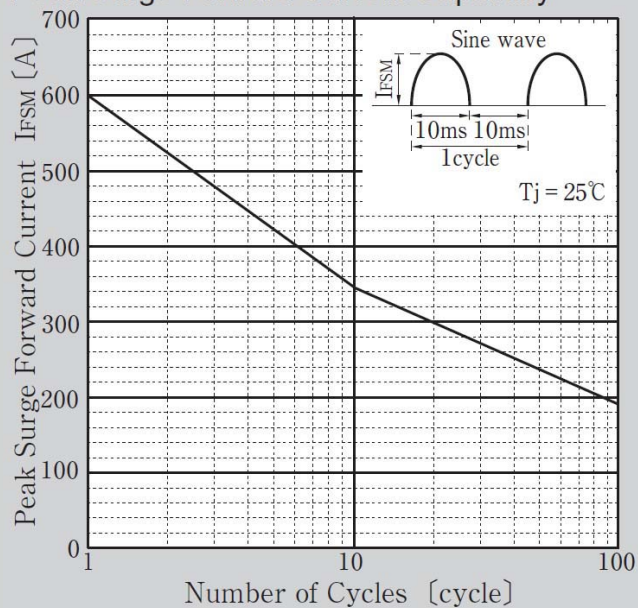
Forward Power Dissipation



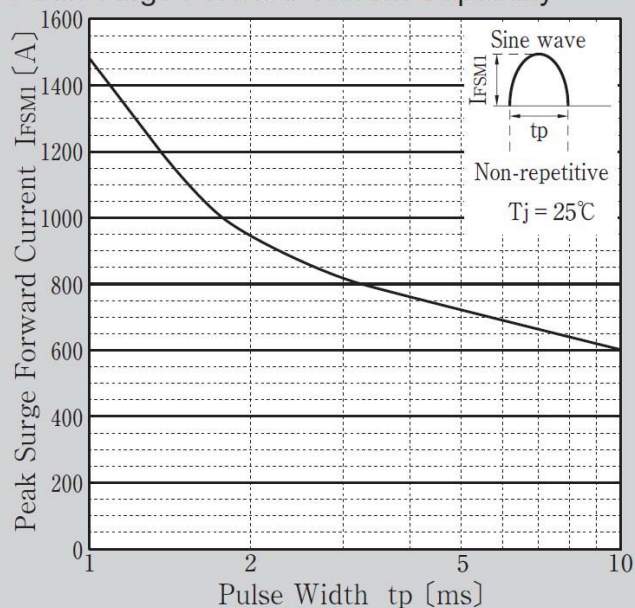
Derating Curve



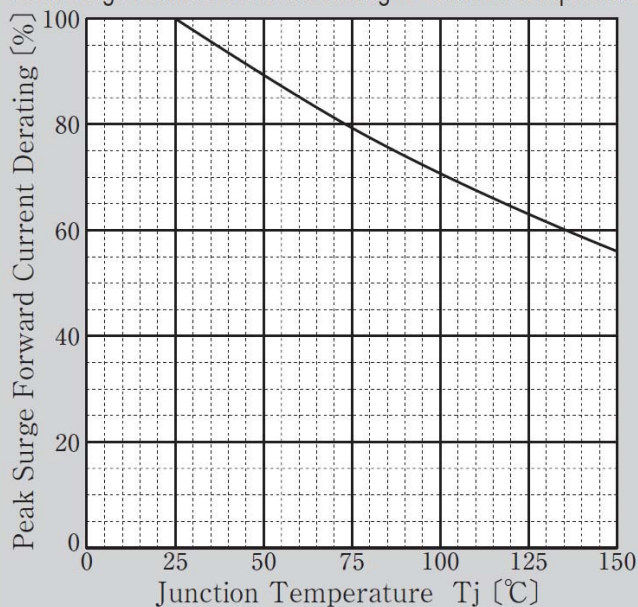
Peak Surge Forward Current Capability



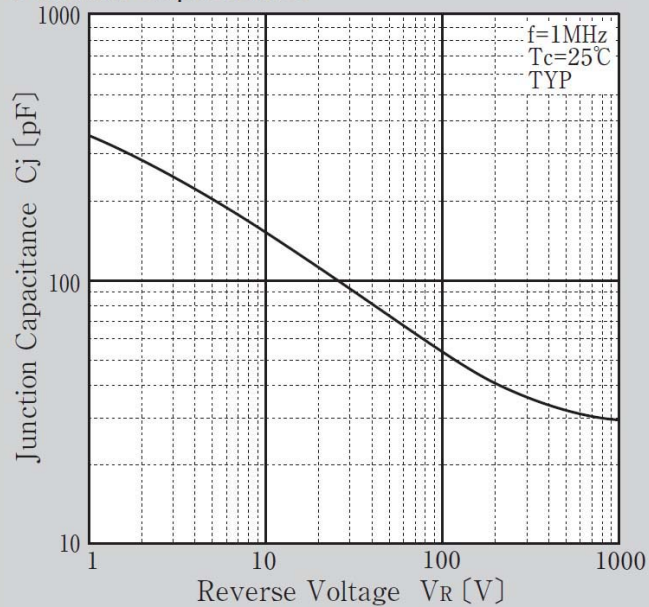
Peak Surge Forward Current Capability

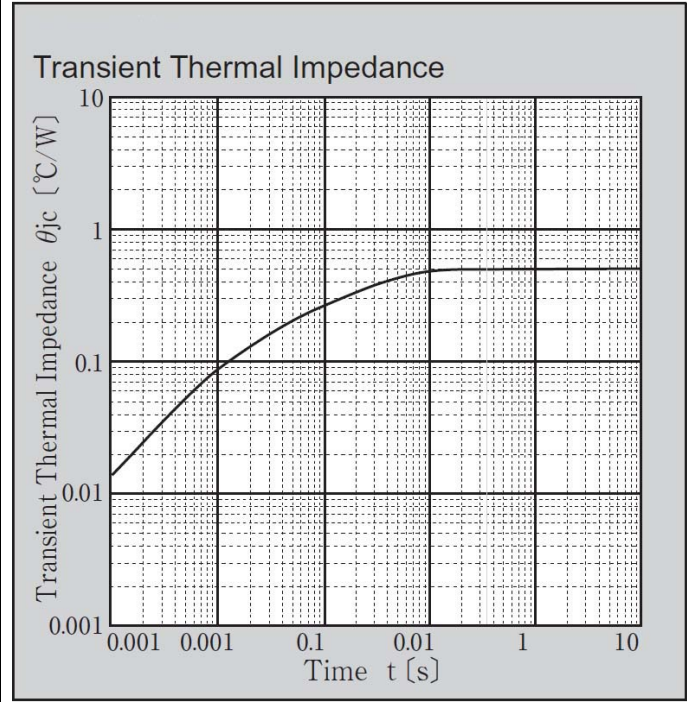


Peak Surge Forward Current Derating vs Junction Temperature



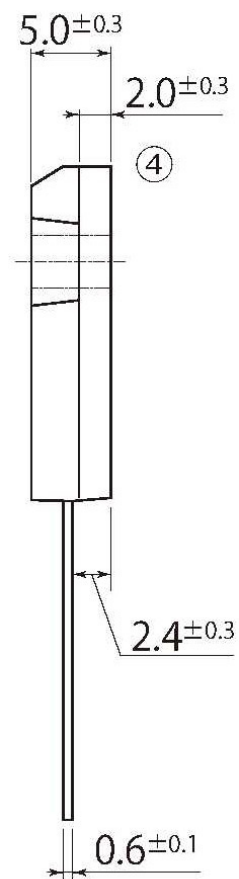
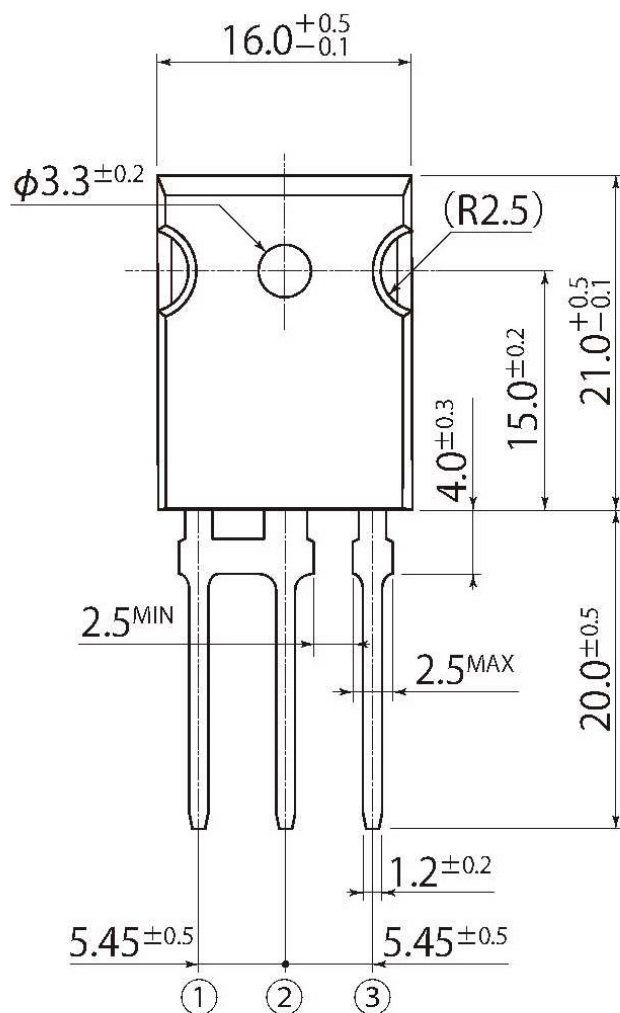
Junction Capacitance





K6

| | |
|------------|----------|
| JEDEC Code | TO-247AD |
| JEITA Code | — |
| House Name | MTO-3PV |



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