

FEATURES

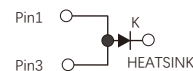
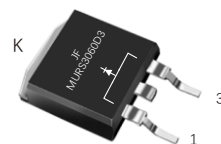
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Ultrafast and soft recovery time for high efficiency
- Low VF ,Low power loss
- Polyimide passivation
- High surge capability
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU



TO-263(D²PAK)

MECHANICAL DATA

- Case: JEDEC TO-263(D²PAK) molded plastic body
- Terminals: Lead solderable per MIL-STD-750,method 2026
- Polarity: As marked
- Mounting Position: Any



TYPICAL APPLICATIONS

For use in boost stage in SMPS
 high frequency inverters for solar inverters
 DC/DC converters
 high frequency output rectification of battery chargers
 free wheeling diodes in motor drivers

MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--|-----------|------------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 600 | V |
| Maximum average forward rectified current | $I_F(AV)$ | 30.0 | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T_J) | I_{FSM} | 250 | A |
| Operating junction temperature range | T_J | -55 to+175 | °C |
| Storage temperature range | T_{stg} | -55 to+175 | °C |

ELECTRICAL CHARACTERISTICS (T_J=25°C Unless otherwise noted)

| Parameter | Test Conditions | | Symbol | Min. | Typ. | Max. | Unit |
|---------------------------------------|-----------------|----------|-------------------|------|------|------|------|
| Breakdown voltage Blocking voltage | IR=200μA | | V_{BR} V_R | 600 | - | - | V |
| Instaneous forward voltage | Tj=25°C | IF=15.0A | $V_F^{1)}$ | - | 1.50 | - | V |
| | | IF=30.0A | | - | 1.90 | 2.40 | |
| | Tj=125°C | IF=15.0A | | - | 1.20 | - | |
| | | IF=30.0A | | - | 1.60 | 2.00 | |
| Reverse current | Tj=25°C | VR=600V | $I_R^{2)}$ | - | 1 | 10 | μA |
| | Tj=125°C | | | - | 50 | 250 | |
| Junction capacitance | 4V,1MHz | | Cj | - | 121 | - | pF |

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle

2.Pulse test: pulse width ≤40ms

DYNAMIC RECOVERY CHARACTERISTICS (T_J=25°C Unless otherwise noted)

| Parameter | Test Conditions | Symbol | Min. | Typ. | Max. | Unit |
|-----------------------|--|-----------------|------|------|------|------|
| Reverse recovery time | I _F =0.5A, I _R =1.0A, I _{rr} =0.25A | t _{rr} | - | 30 | 35 | ns |

THERMAL CHARACTERISTICS

| Parameter | Symbol | TO-263 | Unit |
|--|------------------|--------|------|
| Typical thermal resistance ³⁾ | R _{θJC} | 1.5 | °C/W |

3.Thermal resistance from junction to case

AVAILABALE PACK INFORMATION

| Product code | Pack | Box Size L×W×H(mm) | Quantity(pcs/box) | Carton SizeL×W×H(mm) | Quantity(box/carton) |
|-------------------|------|--------------------|-------------------|----------------------|----------------------|
| MURS3060D3-TO-263 | P/T | 548×151×37 | 1000 | 565×225×170 | 5 |

FIG.1-FORWARD CURRENT DERATING CURVE

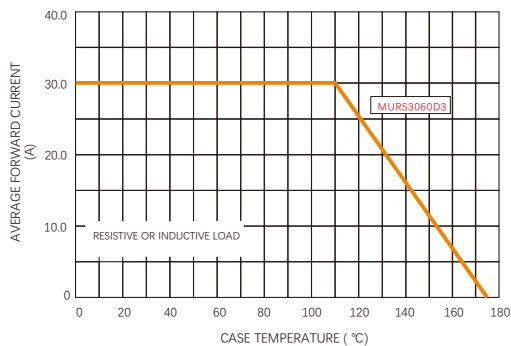


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

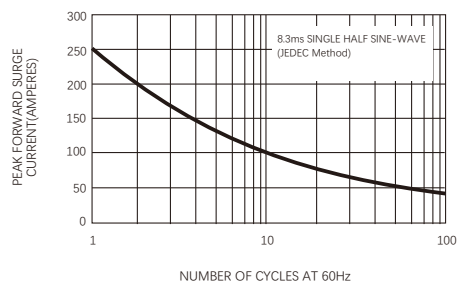


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

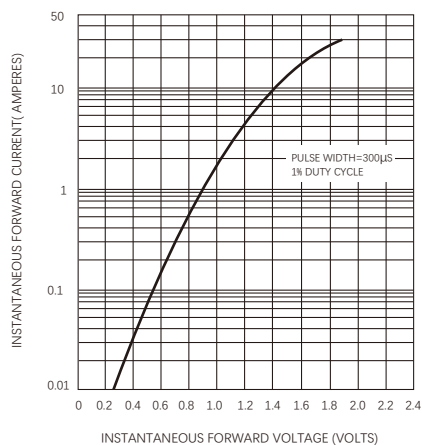


FIG.4-TYPICAL REVERSE CHARACTERISTICS

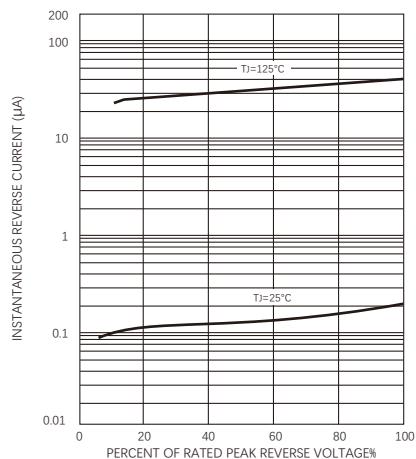
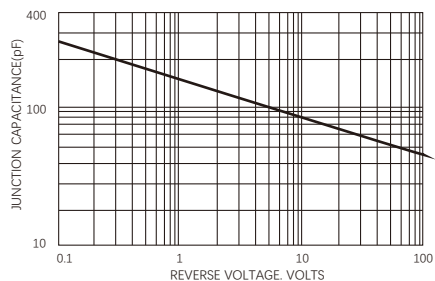
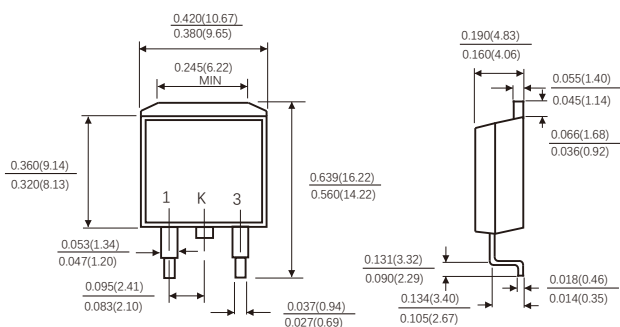


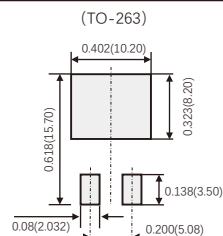
FIG.5-TYPICAL JUNCTION CAPACITANCE



TO-263



Suggested Pad Layout



(设计者可参考推荐值根据焊接工艺要求自行确定适合的焊盘尺寸)
(Designers can refer to the recommended values according to the manufacturing process requirements to determine the appropriate pad size)

Dimensions in inches and (millimeters)

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