



# FMSK1020C-D2G THRU FMSK10200C-D2G

Schottky Barrier Rectifier (Single Chip)

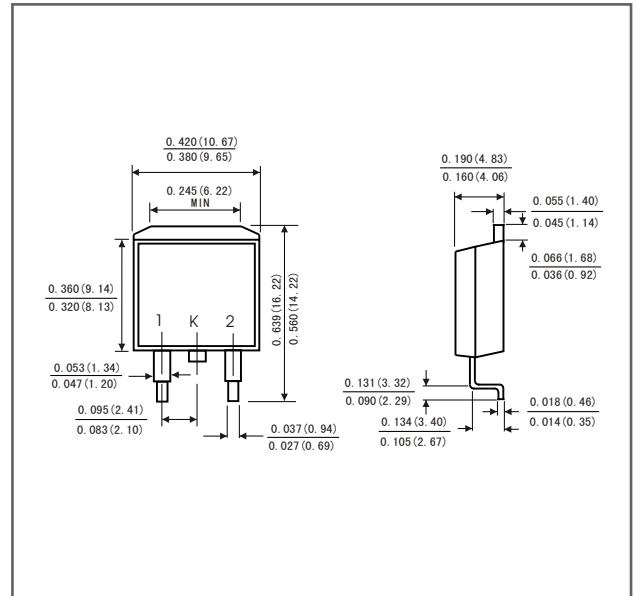
**Reverse Voltage: 20 to 200 Volts**  
**Forward Current: 10.0 Ampere**

## Package outline

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, Low forward voltage drop
- Single rectifier construction
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed:  
260°C/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

### TO-263



Dimensions in inches and (millimeters)

### Mechanical data

- Case: JEDEC TO-263 molded plastic body
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: As marked
- Mounting Position: Any
- Weight: 0.08 ounce, 2.24 gram

### Maximum Ratings And Electrical Characteristics

- Ratings at 25°C ambient temperature unless otherwise specified.
- Single phase, half wave, resistive or inductive load.
- For capacitive load, derate by 20%.

| Type Number  | Symbols             | FMSK 1020 C-D2G | FMSK 1040 C-D2G | FMSK 1045 C-D2G | FMSK 1050 C-D2G | FMSK 1060 C-D2G | FMSK 1080 C-D2G | FMSK 10100 C-D2G | FMSK 10150 C-D2G | FMSK 10200 C-D2G | Units |
|--|---------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|-------|
| Maximum repetitive peak reverse voltage  | $V_{RRM}$           | 20              | 40              | 45              | 50              | 60              | 80              | 100              | 150              | 200              | Volts |
| Maximum RMS voltage  | $V_{RMS}$           | 14              | 28              | 31.5            | 35              | 42              | 56              | 70               | 105              | 140              | Volts |
| Maximum DC blocking voltage  | $V_{DC}$            | 20              | 40              | 45              | 50              | 60              | 80              | 100              | 150              | 200              | Volts |
| Maximum average forward rectified current (see Fig.1)  | $I_{(AV)}$          | 10.0            |                 |                 |                 |                 |                 |                  |                  |                  | Amps  |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$           | 150.0           |                 |                 |                 |                 |                 |                  |                  |                  | Amps  |
| Maximum instantaneous forward voltage at 10.0 A(Note 1)  | $V_F$               | 0.60            |                 | 0.75            |                 | 0.85            |                 | 0.90             | 0.95             |                  | Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)                       | $I_R$               | 0.2             |                 |                 |                 |                 |                 |                  |                  |                  | mA    |
|  | $T_A = 25^\circ C$  | 15              |                 |                 |                 |                 |                 |                  |                  |                  |       |
|  | $T_A = 125^\circ C$ | 50              |                 |                 |                 |                 |                 |                  |                  |                  |       |
| Typical thermal resistance (Note 2)  | $R_{\theta JC}$     | 2.5             |                 |                 |                 |                 |                 |                  |                  |                  | °C/W  |
| Operating junction temperature range   | $T_J$               | -65 to +150     |                 |                 |                 |                 |                 |                  |                  |                  | °C    |
| Storage temperature range  | $T_{STG}$           | -65 to +150     |                 |                 |                 |                 |                 |                  |                  |                  | °C    |

Notes: 1.Pulse test: 300  $\mu s$  pulse width,1% duty cycle  
 2.Thermal resistance from junction to case

## Rating and characteristic curves

FIG.1-FORWARD CURRENT DERATING CURVE

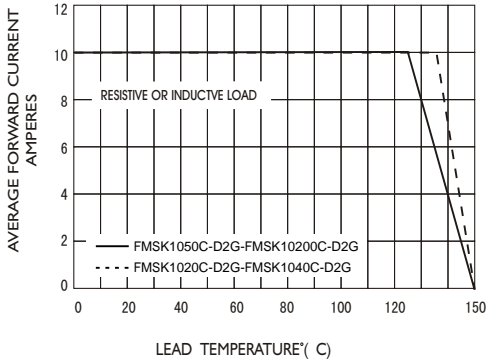


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

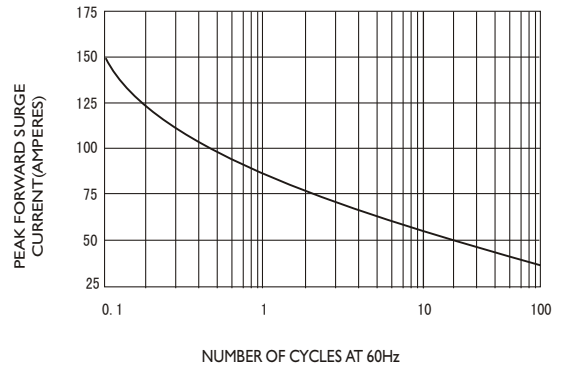


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

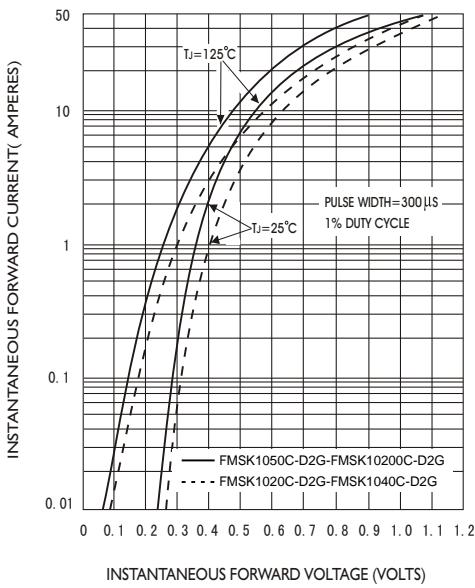


FIG.4-TYPICAL REVERSE CHARACTERISTICS

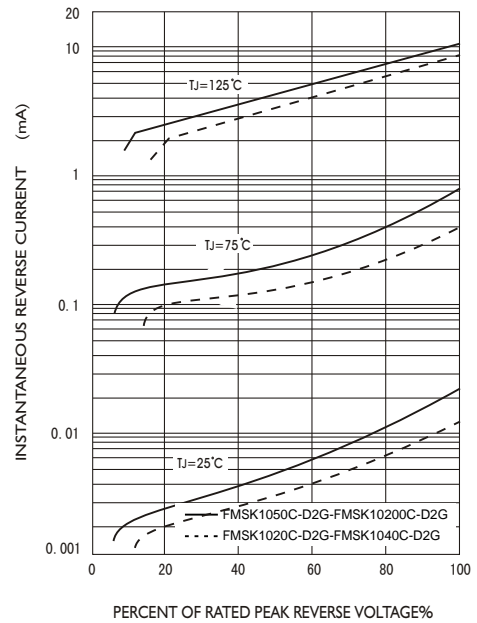


FIG.5-TYPICAL JUNCTION CAPACITANCE

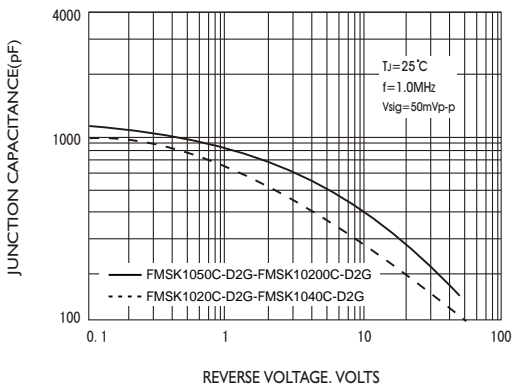


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

