

(120V / 5A)

High Voltage Schottky barrier diode

■ Outline drawings, mm

The drawing shows the mechanical specifications of the TO-220F package. The front view (left) includes dimensions for the body width (10±0.5 mm), mounting hole diameter (ø3.2^{+0.2}_{-0.1} mm), body height (15±0.3 mm), and lead dimensions (2.7±0.2 mm, 1.2±0.2 mm, 0.7±0.2 mm, 2.54±0.2 mm). The side view (right) shows the maximum height (6.3 mm) and standoff dimensions (4.5±0.2 mm, 2.7±0.2 mm, 0.6^{+0.2}₋₀ mm, 2.7±0.2 mm). Three leads are labeled 1, 2, and 3.

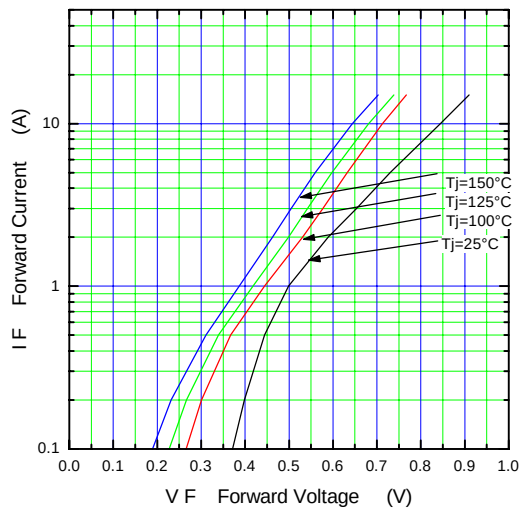
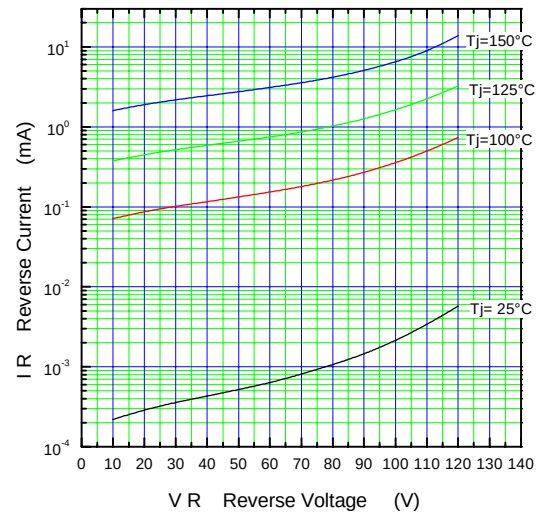
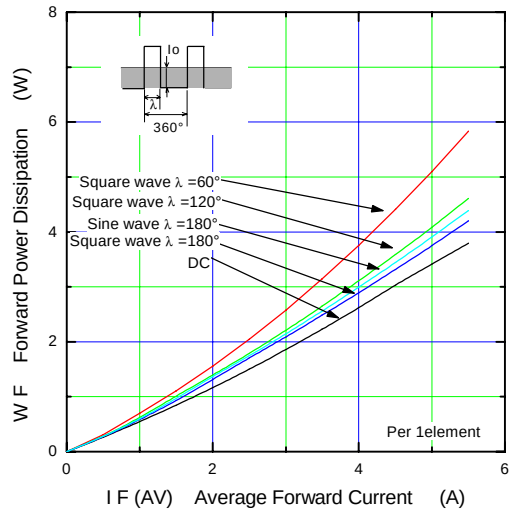
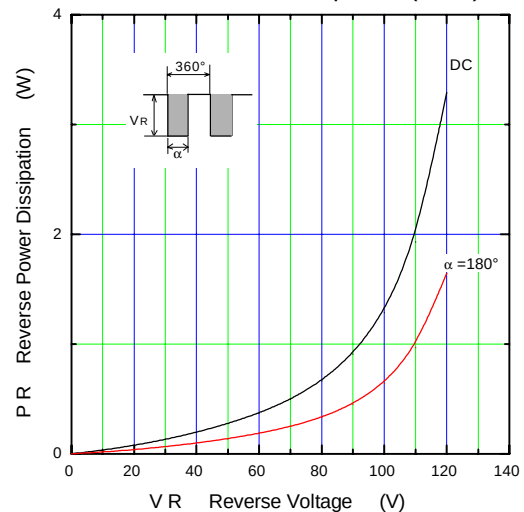
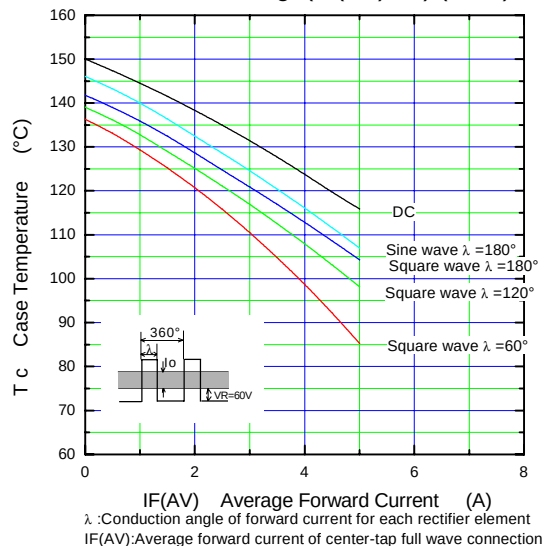
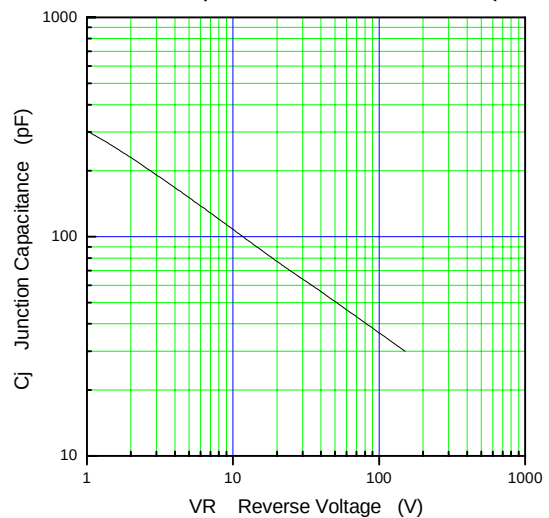
■ Applications

- Connection diagram

- | Item | Symbol | Conditions | Rating | Unit |
|---------------------------------------|-----------|-----------------------------------|-------------|------|
| Repetitive peak surge reverse voltage | V_{RSM} | tw=500ns, duty=1/40 | 120 | V |
| Repetitive peak reverse voltage | V_{RRM} | | 120 | V |
| Isolating voltage | V_{ISO} | Terminals-to-Case,
AC.1min | 1500 | V |
| Average output current | I_o | Square wave, duty=1/2
Tc=104°C | 5 | A |
| Non-repetitive surge current | I_{FSM} | Sine wave
10ms 1shot | 75 | A |
| Operating junction temperature | T_j | | +150 | °C |
| Storage temperature | T_{stg} | | -40 to +150 | °C |

- | Item | Symbol | Conditions | Max. | Unit |
|----------------------|---------------|------------------|------|---------------|
| Forward voltage drop | V_F | $I_{FM}=10A$ | 0.88 | V |
| Reverse current | I_R | $V_R=V_{RRM}$ | 150 | μA |
| Thermal resistance | $R_{th(j-c)}$ | Junction to case | 5.0 | $^{\circ}C/W$ |

- | | | | |
|------------------|--------------------|------------|-----|
| Mounting torque | Recommended torque | 0.3 to 0.5 | N·m |
| Approximate mass | | 2 | g |

■ Characteristics**Forward Characteristic (typ.)****Reverse Characteristic (typ.)****Forward Power Dissipation (max.)****Reverse Power Dissipation (max.)****Current Derating ($I_F(AV)-T_c$) (max.)****Junction Capacitance Characteristic (max.)**

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YG861S12R (5A)

