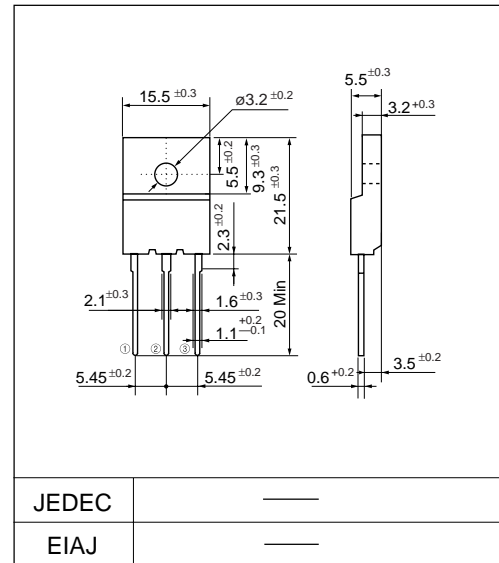


ESAC83M-004 (20A)

(40V / 20A)

SCHOTTKY BARRIER DIODE

Outline drawings, mm



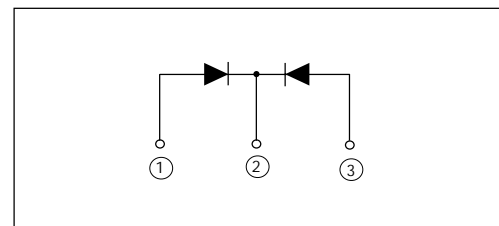
Features

- Insulated package by fully molding
- Low V_F
- Super high speed switching
- High reliability by planer design

Applications

- High speed power switching

Connection diagram



Maximum ratings and characteristics

- Absolute maximum ratings

| Item | Symbol | Conditions | Rating | Unit |
|-------------------------------------|-----------|--|-------------|------------------|
| Repetitive peak reverse voltage | V_{RRM} | | 40 | V |
| Non-repetitive peak reverse voltage | V_{RSM} | $t_w=500\text{ns}$, $\text{duty}=1/40$ | 48 | V |
| Average output current | I_o | Square wave, $\text{duty}=1/2$ $T_c=79^\circ\text{C}$ | 20* | A |
| Surge current | I_{FSM} | Sine wave 10ms | 120 | A |
| Operating junction temperature | T_j | | -40 to +150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | | -40 to +150 | $^\circ\text{C}$ |

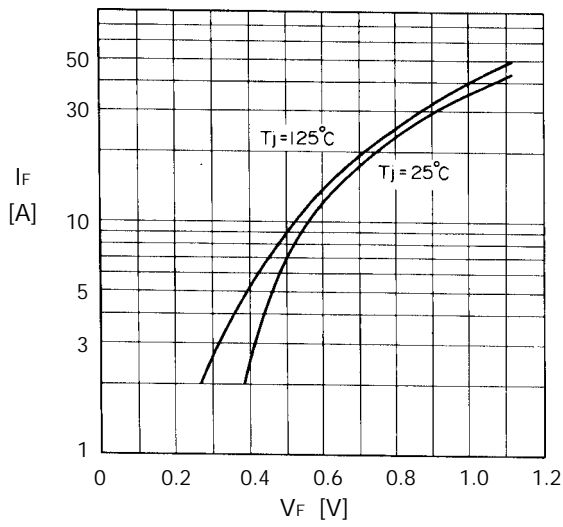
* Average forward current of centertap full wave connection

- Electrical characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

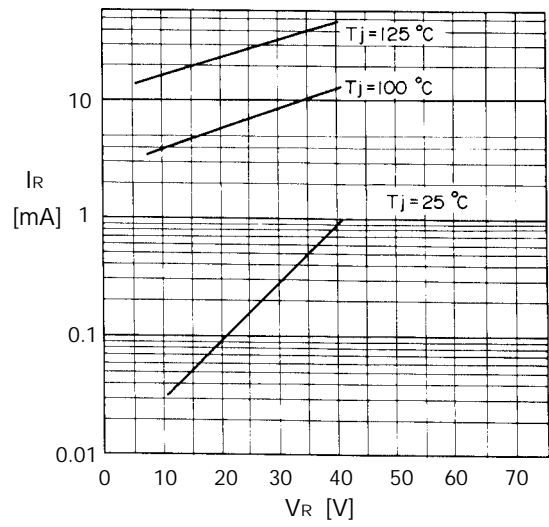
| Item | Symbol | Conditions | Max. | Unit |
|----------------------|---------------|--------------------|------|---------------------------|
| Forward voltage drop | V_{FM} | $I_{FM}=8\text{A}$ | 0.55 | V |
| Reverse current | I_{RRM} | $V_R=V_{RRM}$ | 15 | mA |
| Thermal resistance | $R_{th(j-c)}$ | Junction to case | 2.5 | $^\circ\text{C}/\text{W}$ |

■ Characteristics

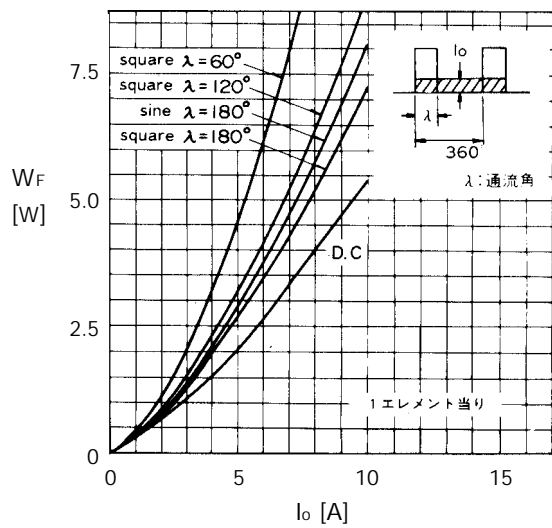
Forward characteristics



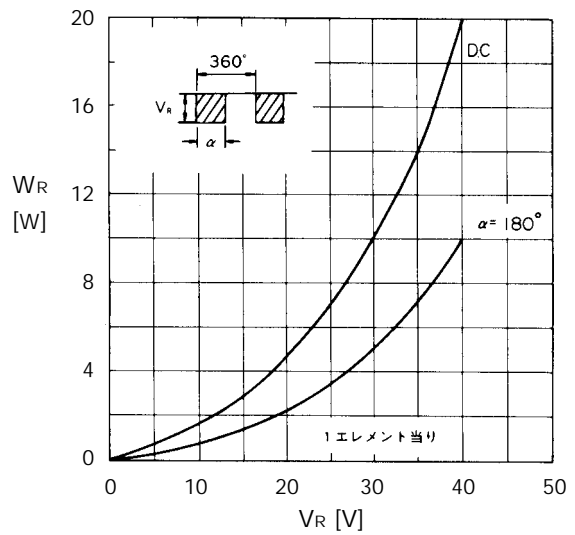
Reverse characteristics



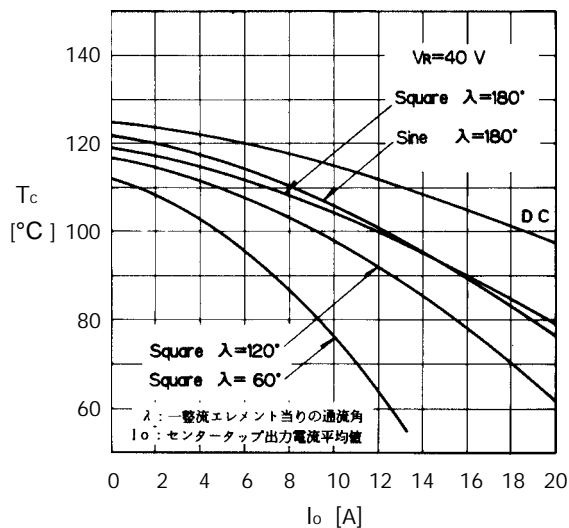
Forward power dissipation



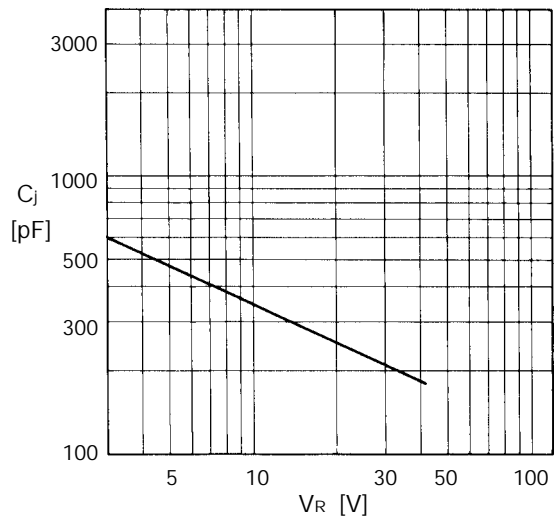
Reverse power dissipation



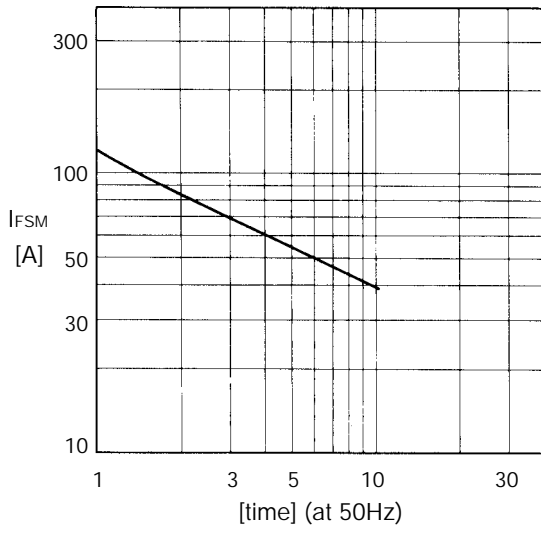
Output current-case temperature



Junction capacitance characteristics



Surge capability



Transient thermal impedance

