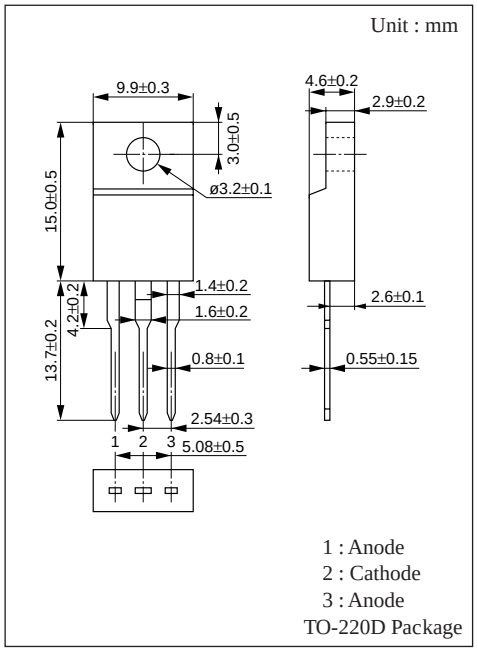
# MA7D49, MA7D49A

## Silicon epitaxial planer type (cathode common)

For switching power supply




### ■ Features

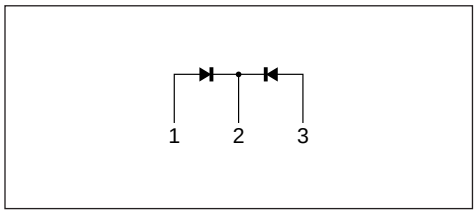
- Low forward voltage $V_F$
- TO-220D (full-pack package) with high dielectric strength > 5.0kV
- Lead end to be V cut for easy mounting

### ■ Absolute Maximum Ratings (Ta= 25˚C)

| Parameter | | Symbol | Rating | Unit |
|---|---|---|---|---|
| Repetitive peak reverse voltage | MA7D49 | $V_{RRM}$ | 40 | V |
| | MA7D49A | | 45 | |
| Average forward current | | $I_{F(AV)}$ | 5 | A |
| Non-repetitive peak forward surge current | | $I_{FSM}$* | 90 | A |
| Junction temperature | | $T_j$ | – 40 to +125 | ˚C |
| Storage temperature | | $T_{stg}$ | – 40 to +125 | ˚C |

* Sine half wave : 10ms/cycle

### ■ Internal Connection

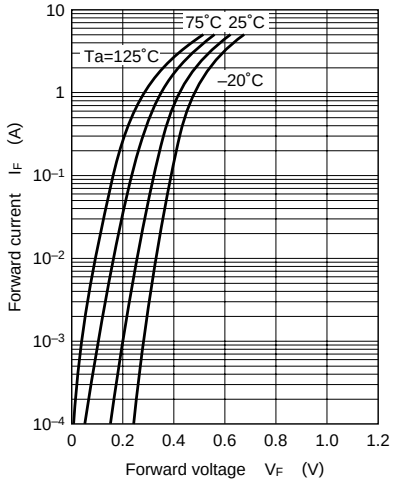



### ■ Electrical Characteristics (Ta= 25˚C)

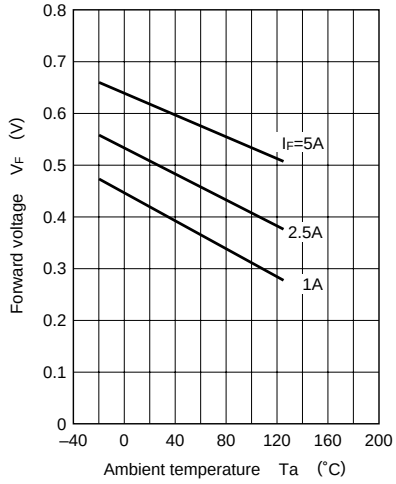
| Parameter | | Symbol | Condition | min | typ | max | Unit |
|---|---|---|---|---|---|---|---|
| Reverse current (DC) | MA7D49 | $I_R$ | $V_R$= 40V, $T_C$= 25˚C | | | 1 | mA |
| | MA7D49A | | $V_R$= 45V, $T_C$= 25˚C | | | 1 | |
| Forward voltage (DC) | | $V_F$ | $I_F$= 2.5A, $T_C$= 25˚C | | | 0.55 | V |
| Thermal resistance | | $R_{th(j-c)}$ | Flat direct current between junction and case | | | 3 | ˚C/W |

❖ Rated input/output frequency : 200MHz

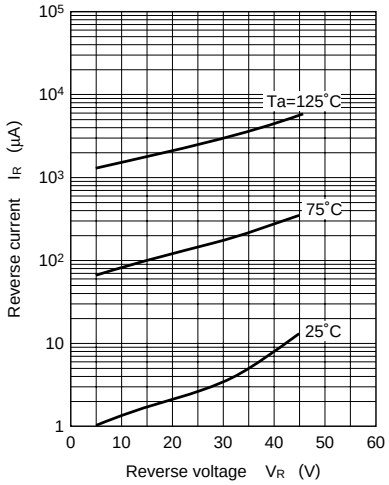
$I_F - V_F$



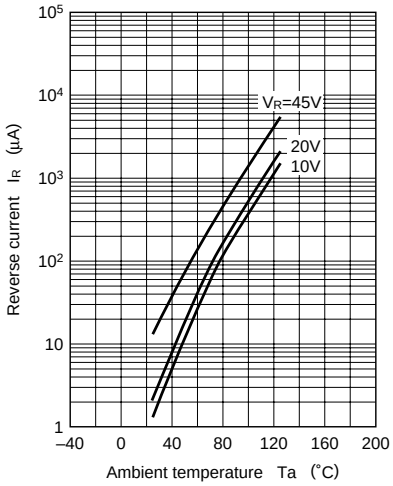

$V_F - Ta$



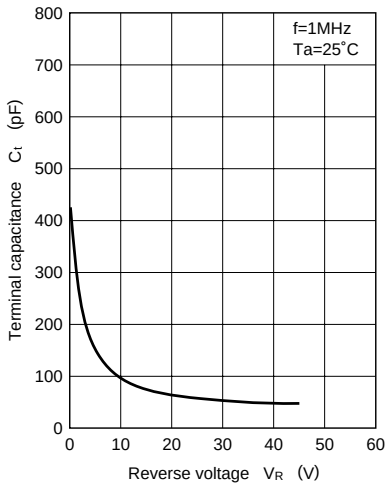

$I_R - V_R$



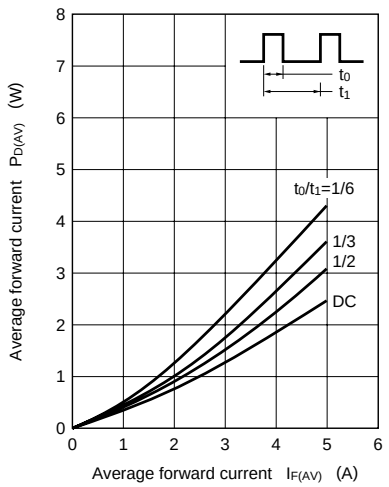

$I_R - Ta$




$C_t - V_R$




$P_{D(AV)} - I_{F(AV)}$




$I_{F(AV)} - T_C$