

Switching diode

DAN222M / DAN222 / DAN202U / DAN202K DAP222M / DAP222 / DAP202U / DAP202K DA227

●Application

Ultra high speed switching




●Features

- 1) Four types of packaging are available.
- 2) High speed. ($t_{rr}=1.5\text{ns Typ.}$)
- 3) Suitable for high packing density layout.
- 4) High reliability.

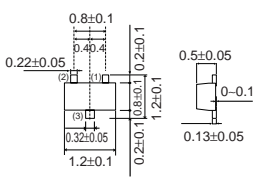
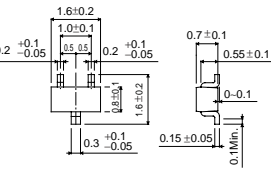
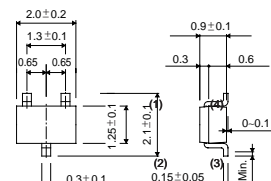
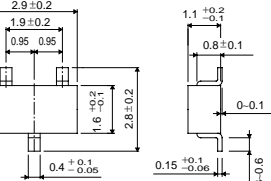
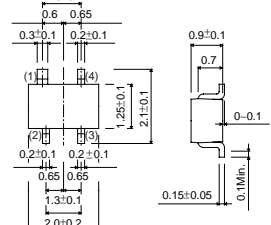
●Construction

Silicon epitaxial planar

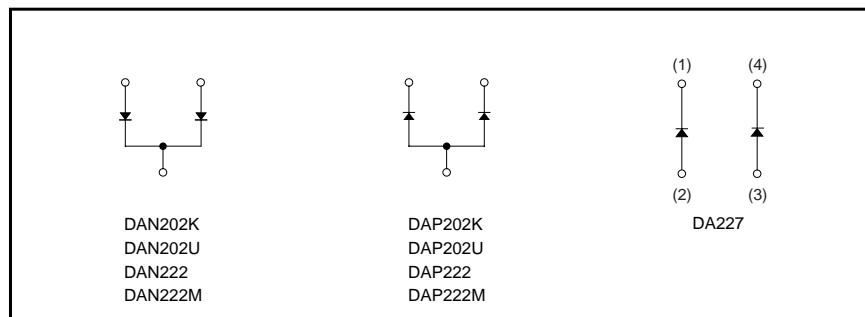
●Marking

| | |
|---|---|
| DAN222M DAN222 DAN202U DAN202K |  |
| DAP222M DAP222 DAP202U DAP202K |  |
| DA227 |  |

●External dimensions (Unit : mm)

| | |
|--|---|
| <p>DAN222M / DAP222M</p>  <p>ROHM : VMD3 EIAJ : JEDEC :</p> | <p>DAN222 / DAP222</p>  <p>ROHM : EMD3 EIAJ : SC - 75 JEDEC : SOT - 416</p> |
| <p>DAN202U / DAP202U</p>  <p>ROHM : UMD3 EIAJ : SC - 70 JEDEC : SOT - 323</p> | <p>DAN202K / DAP202K</p>  <p>ROHM : SMD3 EIAJ : SC - 59 JEDEC : SOT - 346</p> |
| <p>DA227</p>  <p>ROHM : UMD4 EIAJ : SC - 82 JEDEC : SOT - 343</p> | |

●Circuits



●Absolute maximum ratings (Ta=25°C)

| Type | Peak reverse voltage V _{RM} (V) | DC reverse voltage V _R (V) | Peak forward current I _{FM} (mA) | Mean rectifying current I _o (mA) | Surge current (1 μs) I _{surge} (A) | Power dissipation (TOTAL) Pd(mW) | Junction temperature T _j (°C) | Storage temperature T _{stg} (°C) | P / N Type |
|---------|---|--|--|--|---|--|---|--|---------------|
| DAN202K | 80 | 80 | 300 | 100 | 4 | 200 | 150 | -55 to +150 | N |
| DAP202K | 80 | 80 | 300 | 100 | 4 | 200 | 150 | -55 to +150 | P |
| DAN202U | 80 | 80 | 300 | 100 | 4 | 200 | 150 | -55 to +150 | N |
| DAP202U | 80 | 80 | 300 | 100 | 4 | 200 | 150 | -55 to +150 | P |
| DAN222 | 80 | 80 | 300 | 100 | 4 | 150 | 150 | -55 to +150 | N |
| DAP222 | 80 | 80 | 300 | 100 | 4 | 150 | 150 | -55 to +150 | P |
| DAN222M | 80 | 80 | 300 | 100 | 4 | 150 | 100 | -55 to +150 | N |
| DAP222M | 80 | 80 | 300 | 100 | 4 | 150 | 100 | -55 to +150 | P |
| DA227 | 80 | 80 | 300 | 100 | 4 | 150 | 150 | -55 to +150 | N |

●Electrical characteristics (Ta=25°C)

| Type | Forward voltage | | Reverse current | | Capacitance between terminals | | | Reverse recovery time | | |
|---------|----------------------------|---------------------|-----------------------------|--------------------|-------------------------------|--------------------|---------|------------------------------|--------------------|---------------------|
| | V _F (V) Max. | Cond. | I _R (μA) Max. | Cond. | C _T (pF) Max. | Cond. | | t _{rr} (ns) Max. | Cond. | |
| | | I _F (mA) | | V _R (V) | | V _R (V) | f (MHz) | | V _R (V) | I _F (mA) |
| DAN202K | 1.2 | 100 | 0.1 | 70 | 3.5 | 6 | 1 | 4 | 6 | 5 |
| DAP202K | 1.2 | 100 | 0.1 | 70 | 3.5 | 6 | 1 | 4 | 6 | 5 |
| DAN202U | 1.2 | 100 | 0.1 | 70 | 3.5 | 6 | 1 | 4 | 6 | 5 |
| DAP202U | 1.2 | 100 | 0.1 | 70 | 3.5 | 6 | 1 | 4 | 6 | 5 |
| DAN222 | 1.2 | 100 | 0.1 | 70 | 3.5 | 6 | 1 | 4 | 6 | 5 |
| DAP222 | 1.2 | 100 | 0.1 | 70 | 3.5 | 6 | 1 | 4 | 6 | 5 |
| DAN222M | 1.2 | 100 | 0.1 | 70 | 3.5 | 6 | 1 | 4 | 6 | 5 |
| DAP222M | 1.2 | 100 | 0.1 | 70 | 3.5 | 6 | 1 | 4 | 6 | 5 |
| DA227 | 1.2 | 100 | 0.1 | 70 | 3.5 | 6 | 1 | 4 | 6 | 5 |

●Electrical characteristic curves (Ta=25°C)

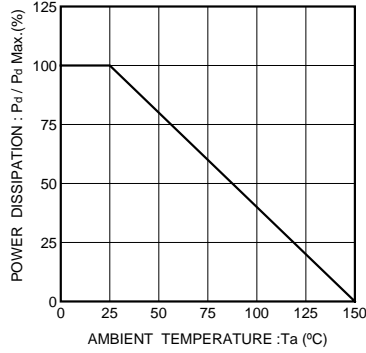


Fig.1 Power attenuation curve

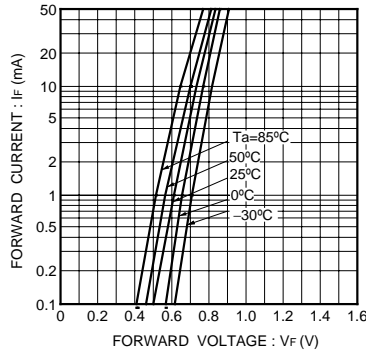


Fig.2 Forward characteristics (P Type)

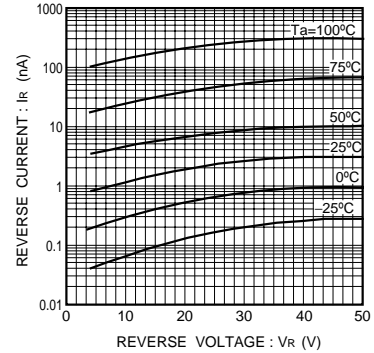


Fig.3 Reverse characteristics (P Type)

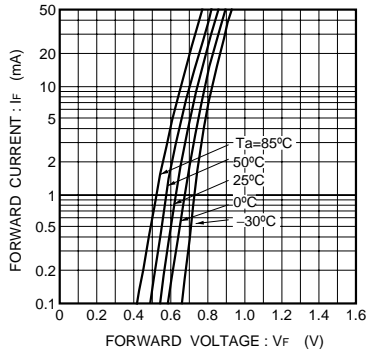


Fig.4 Forward characteristics (N Type)

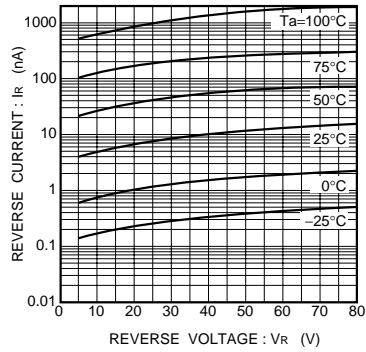


Fig.5 Reverse characteristics (N Type)

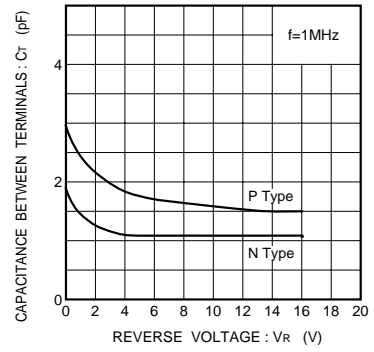


Fig.6 Capacitance between terminals characteristics

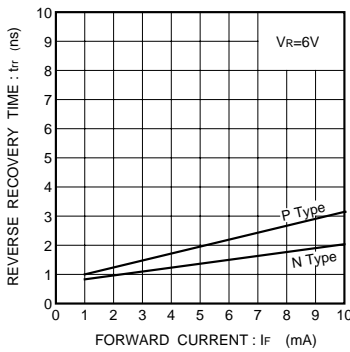


Fig.7 Reverse recovery time

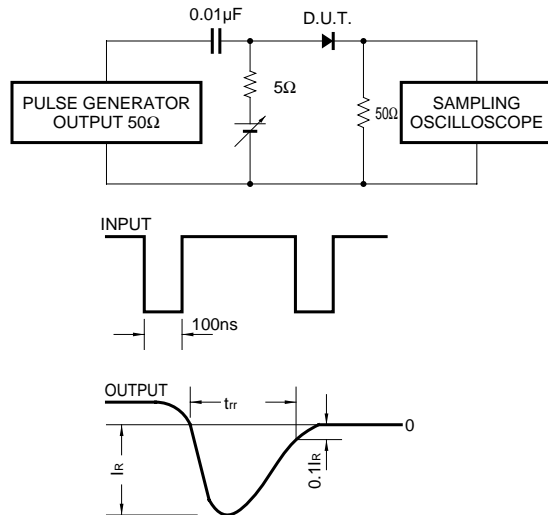


Fig.8 Reverse recovery time (t_{rr}) measurement circuit

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