

# 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.

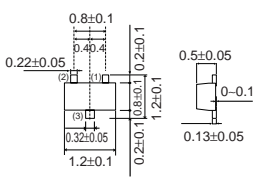
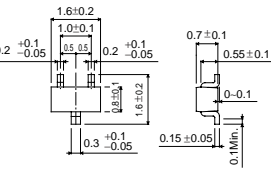
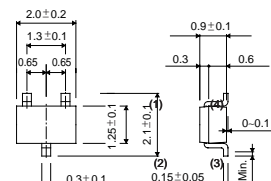
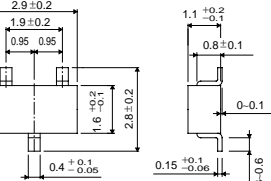
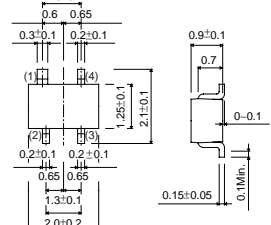
●Construction

Silicon epitaxial planar

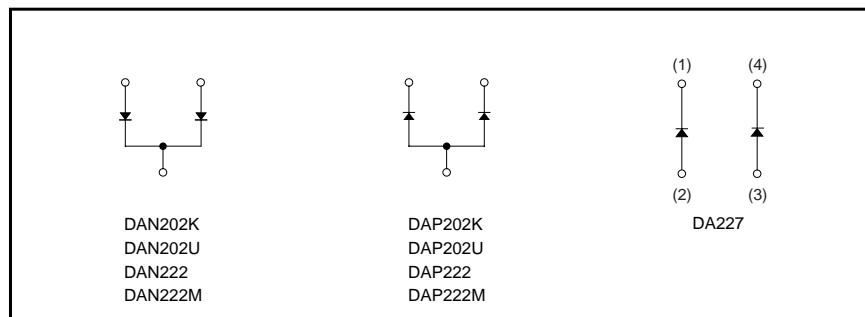
●Marking

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 <sub>RM</sub> (V)	DC reverse voltage V <sub>R</sub> (V)	Peak forward current I <sub>FM</sub> (mA)	Mean rectifying current I <sub>o</sub> (mA)	Surge current (1 μs) I <sub>surge</sub> (A)	Power dissipation (TOTAL) Pd(mW)	Junction temperature T <sub>j</sub> (°C)	Storage temperature T <sub>stg</sub> (°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 <sub>F</sub> (V) Max.	Cond.	I <sub>R</sub> (μA) Max.	Cond.	C <sub>T</sub> (pF) Max.	Cond.		t <sub>rr</sub> (ns) Max.	Cond.	
		I <sub>F</sub> (mA)		V <sub>R</sub> (V)		V <sub>R</sub> (V)	f (MHz)		V <sub>R</sub> (V)	I <sub>F</sub> (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)

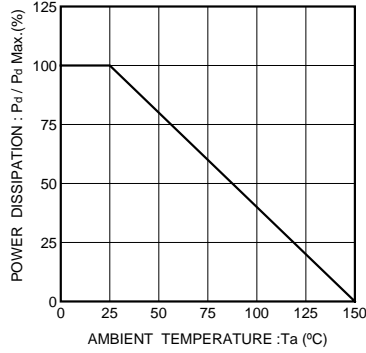


Fig.1 Power attenuation curve

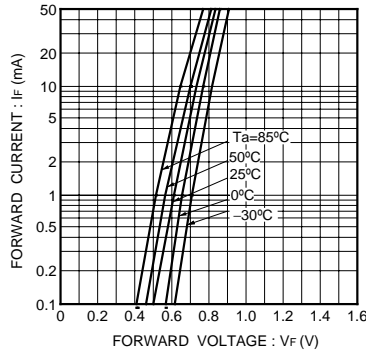


Fig.2 Forward characteristics (P Type)

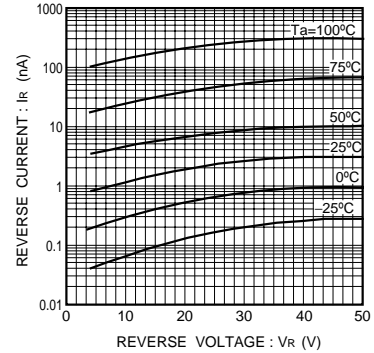


Fig.3 Reverse characteristics (P Type)

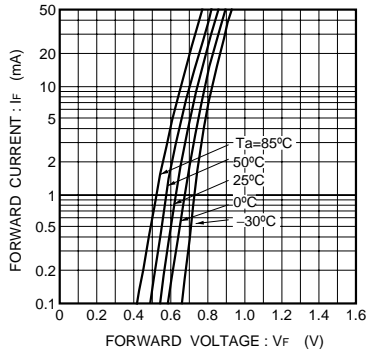


Fig.4 Forward characteristics (N Type)

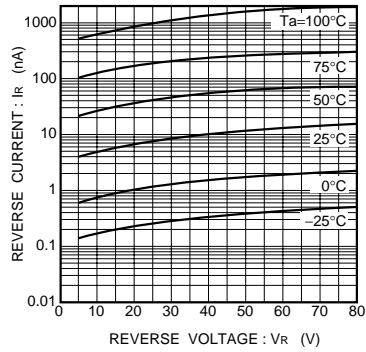


Fig.5 Reverse characteristics (N Type)

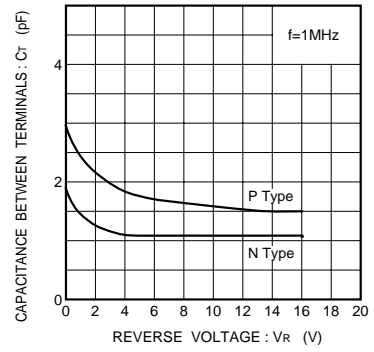


Fig.6 Capacitance between terminals characteristics

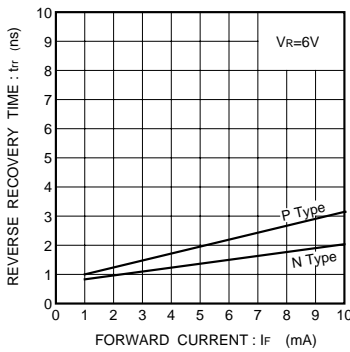


Fig.7 Reverse recovery time

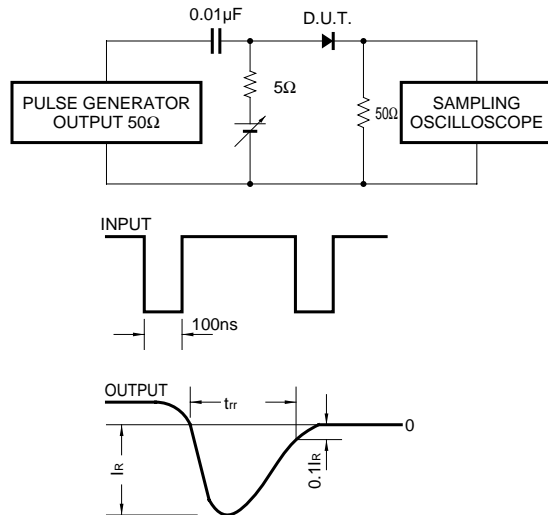


Fig.8 Reverse recovery time ( $t_{rr}$ ) measurement circuit

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