

# Ultra high-speed switching diode arrays

DA114 / DA121 / DA227

DAN202K / DAN202U / DAN212K / DAN222

DAP202K / DAP202U / DAP222

●Applications

Ultra high speed switching

●Features

- 1) Four types of packaging are available.
- 2) High reliability.
- 3) High speed. (Typical recovery time=1.5ns)
- 4) Suitable for high packing density layout.

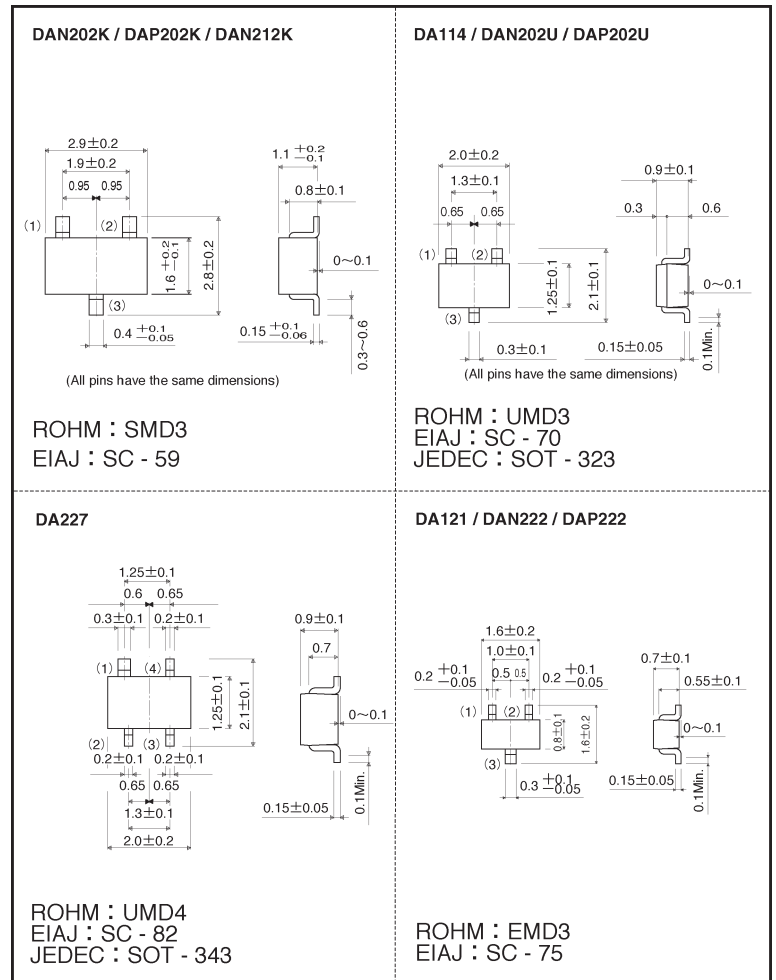
●Construction

Silicon epitaxial planar

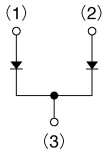
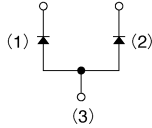
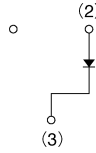
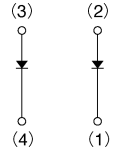
●Marking

DAN222 DAN202U DAN202K	
DAP222 DAP202U DAP202K	
DA121 DA114 DAN212K	
DA227	

●External dimensions (Units: mm)



## ●Equivalent circuits

DAN202K  
DAN202U  
DAN222DAP202K  
DAP202U  
DAP222DA114  
DA121  
DAN212K

DA227

## ●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) P <sub>d</sub> (mW)	Junction temperature T <sub>j</sub> (°C)	Storage temperature T <sub>stg</sub> (°C)	TYPE
DA114	80	80	300	100	4	200	150	-55~+150	N
DA121	80	80	300	100	4	150	150	-55~+150	N
DAN202K	80	80	300	100	4	200	150	-55~+150	N
DAP202K	80	80	300	100	4	200	150	-55~+150	P
DAN202U	80	80	300	100	4	150	150	-55~+150	N
DAP202U	80	80	300	100	4	150	150	-55~+150	P
DAN212K	80	80	300	100	4	200	150	-55~+150	N
DAN222	80	80	300	100	4	150	150	-55~+150	N
DAP222	80	80	300	100	4	150	150	-55~+150	P
DA227	80	80	300	100	4	150	150	-55~+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)
DA114	1.2	100	0.1	70	3.5	6	1	4	6	5
DA121	1.2	100	0.1	70	3.5	6	1	4	6	5
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
DAN212K	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
DA227	1.2	100	0.1	70	3.5	6	1	4	6	5

●Electrical characteristic curves (Ta = 25°C unless specified otherwise)

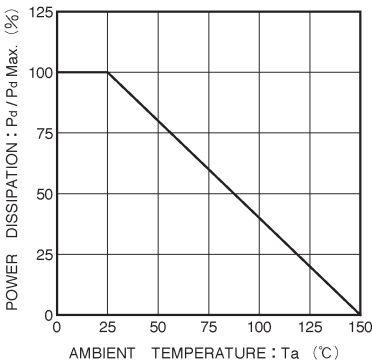


Fig. 1 Derating curve  
 (mounting on glass epoxy  
 PCBs)

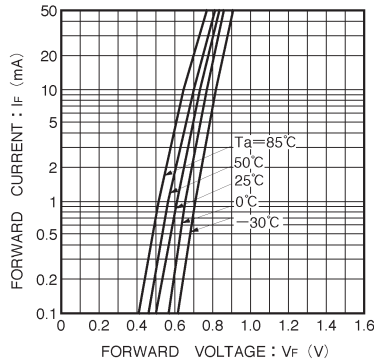


Fig. 2 Forward current vs.  
 forward voltage  
 (P TYPE)

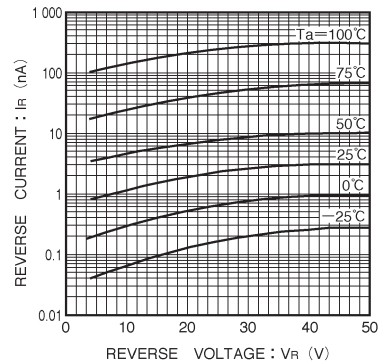


Fig. 3 Reverse current vs.  
 reverse voltage  
 (P TYPE)

●Electrical characteristic curves (Ta = 25°C unless specified otherwise)

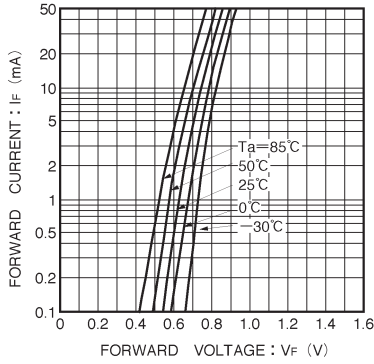


Fig. 4 Forward current vs. forward voltage (N TYPE)

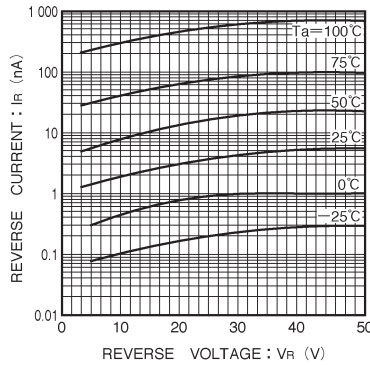


Fig. 5 Reverse current vs. reverse voltage (N TYPE)

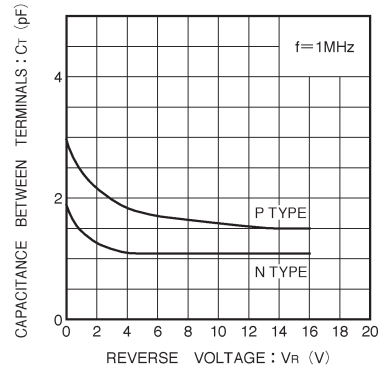


Fig. 6 Capacitance between terminals vs. reverse voltage

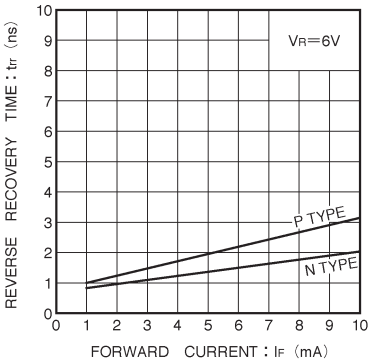


Fig. 7 Reverse recovery time vs. forward current

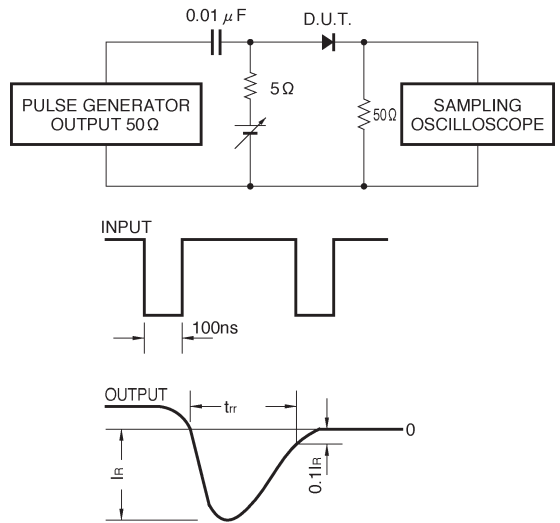


Fig. 8 Reverse recovery time (trr) measurement circuit