

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.

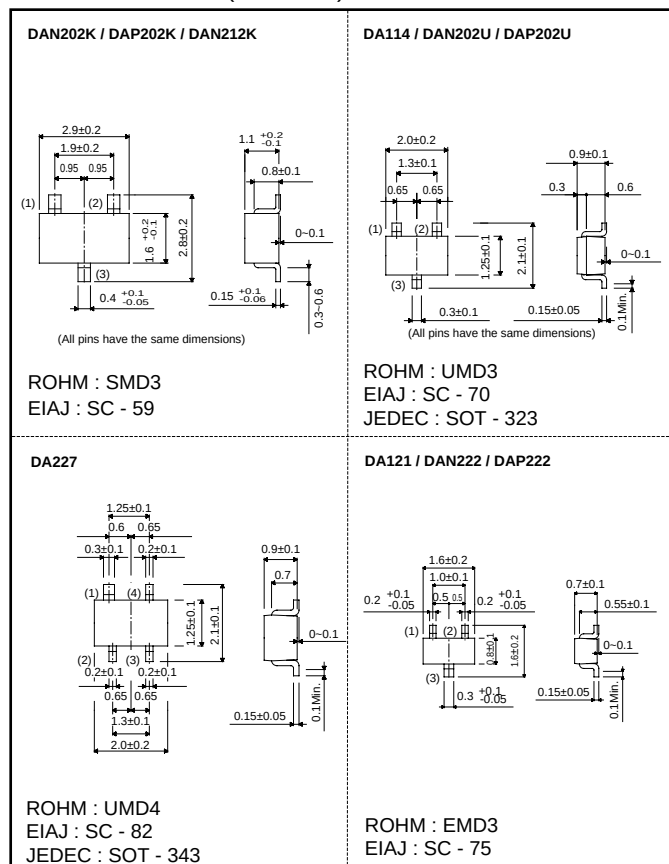
●Construction

Silicon epitaxial planar

●Marking

DAN222 DAN202U DAN202K	N
DAP222 DAP202U DAP202K	P
DA121 DA114 DAN212K	AV
DA227	N20

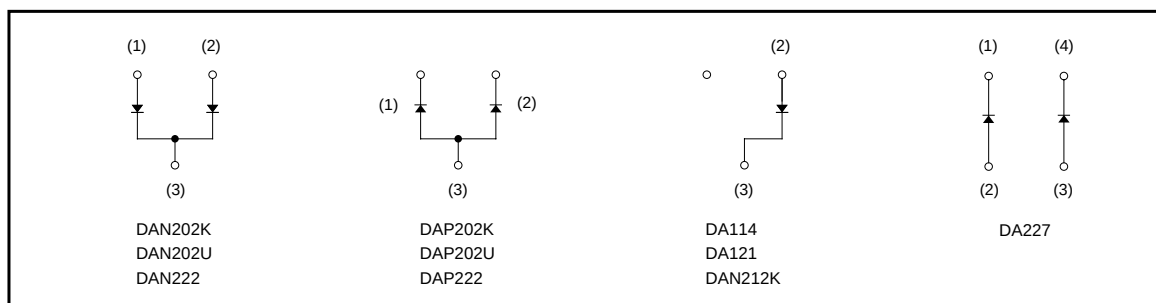
●External dimensions (Units : mm)



Diodes

DA114/DA121/DA227/DAN202K/DAN202U DAN212K/DAN222/DAP202K/DAP202U/DAP222

●Equivalent 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 (1μs) I_{surge} (A)	Power dissipation (TOTAL) P_d (mW)	Junction temperature T_j (°C)	Storage temperature T_{stg} (°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_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)
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 ($T_a=25^\circ\text{C}$ unless specified otherwise)

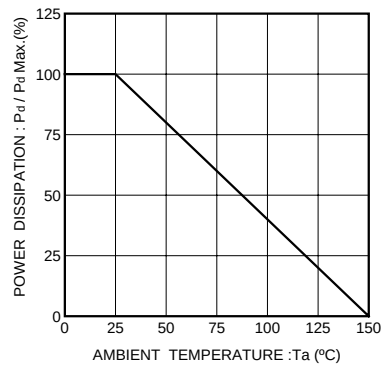


Fig. 1 Derating curve
(mounting on glass epoxy
PCBs)

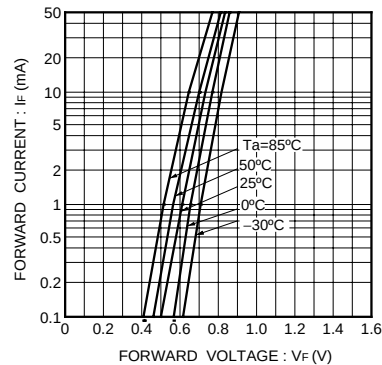


Fig. 2 Forward current vs.
forward voltage
(P TYPE)

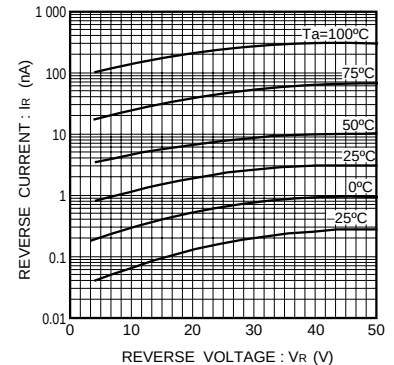


Fig. 3 Reverse current vs.
reverse voltage
(P TYPE)

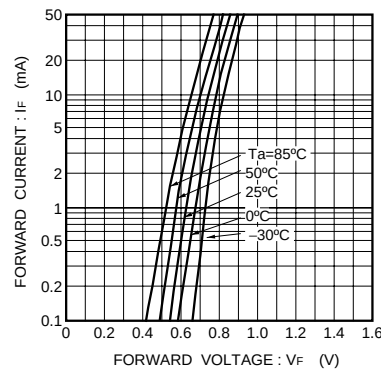


Fig. 4 Forward current vs.
forward voltage
(N TYPE)

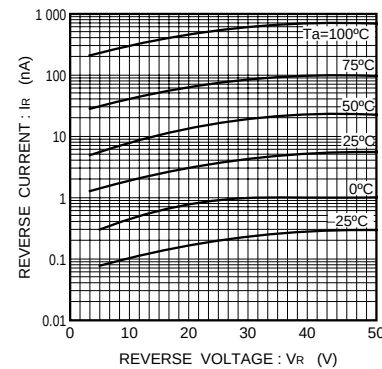


Fig. 5 Reverse current vs.
reverse voltage
(N TYPE)

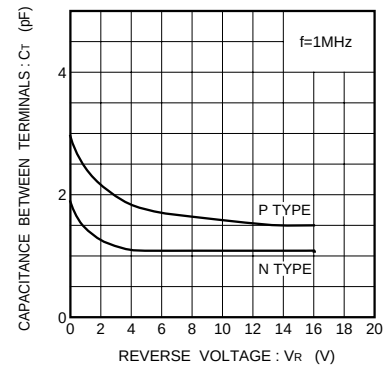


Fig. 6 Capacitance between
terminals vs.
reverse voltage

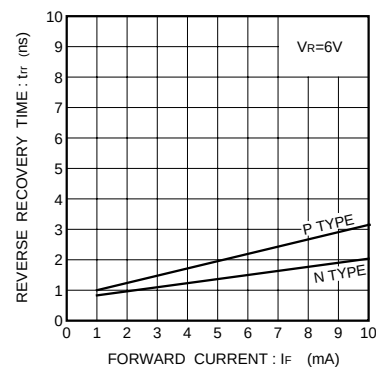


Fig. 7 Reverse recovery time vs.
forward current

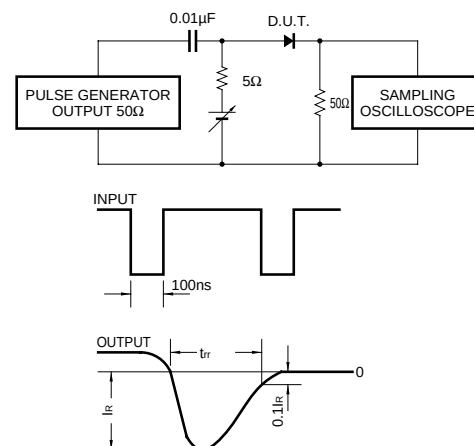


Fig. 8 Reverse recovery time (t_{rr}) measurement circuit