

# 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.

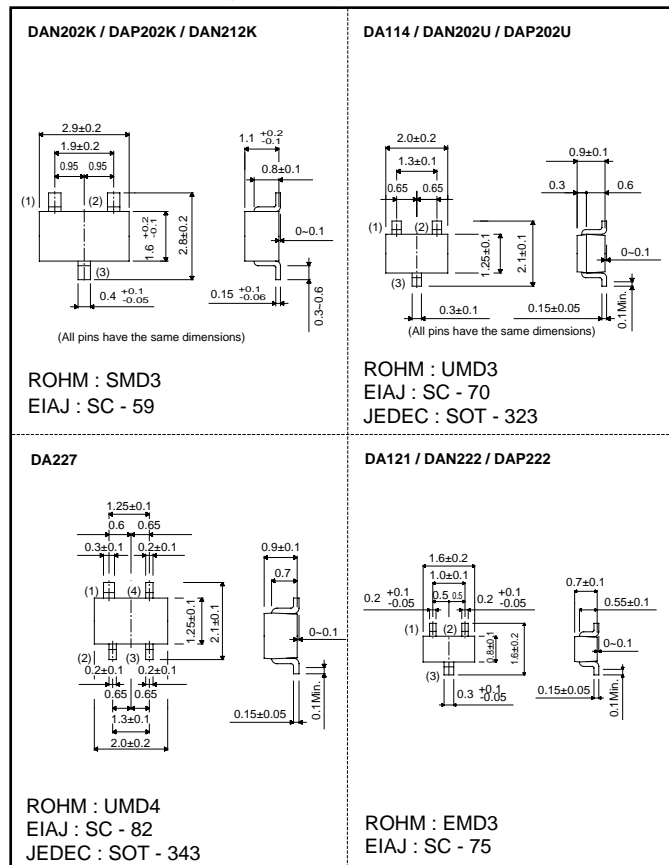
### ●Construction

Silicon epitaxial planar

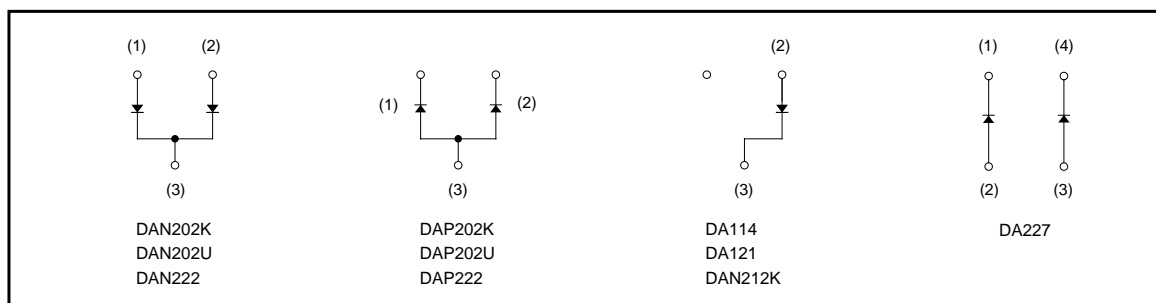
### ●Marking

DAN222 DAN202U DAN202K	
DAP222 DAP202U DAP202K	
DA121 DA114 DAN212K	
DA227	

### ●External dimensions (Units : mm)



## ●Equivalent circuits

●Absolute maximum ratings ( $T_a=25^\circ\text{C}$ )

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 ( $1\mu\text{s}$ ) $I_{\text{surge}}$ (A)	Power dissipation (TOTAL) $P_d$ (mW)	Junction temperature $T_j$ ( $^\circ\text{C}$ )	Storage temperature $T_{\text{stg}}$ ( $^\circ\text{C}$ )	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 ( $T_a=25^\circ\text{C}$ )

Type	Forward voltage		Reverse current		Capacitance between terminals			Reverse recovery time		
	$V_F$ (V) Max.	Cond.	$I_R$ ( $\mu\text{A}$ ) 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 (Ta=25°C unless specified otherwise)

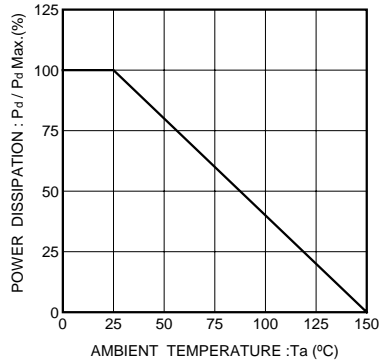


Fig. 1 Derating curve (mounting on glass epoxy PCBs)

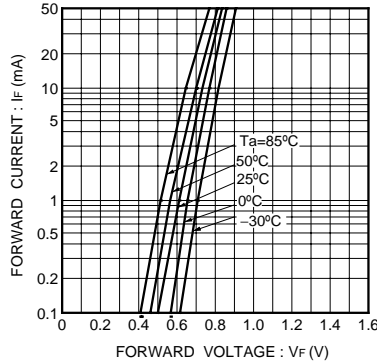


Fig. 2 Forward current vs. forward voltage (P TYPE)

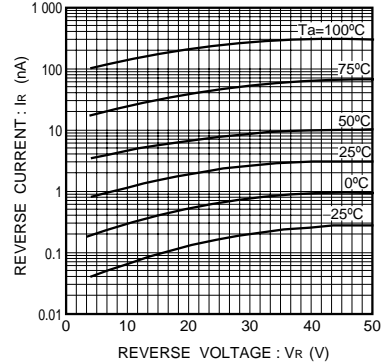


Fig. 3 Reverse current vs. reverse voltage (P TYPE)

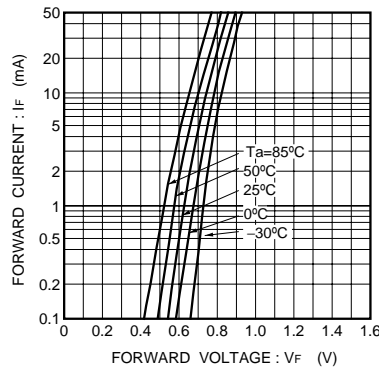


Fig. 4 Forward current vs. forward voltage (N TYPE)

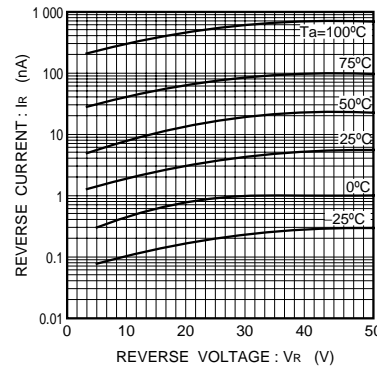


Fig. 5 Reverse current vs. reverse voltage (N TYPE)

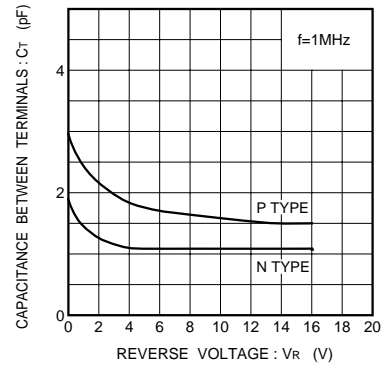


Fig. 6 Capacitance between terminals vs. reverse voltage

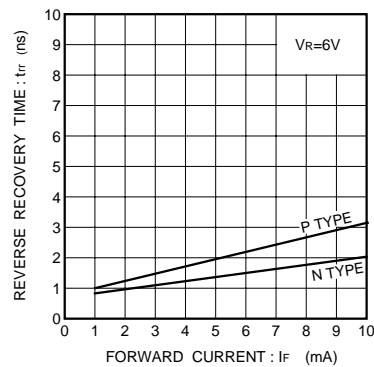


Fig. 7 Reverse recovery time vs. forward current

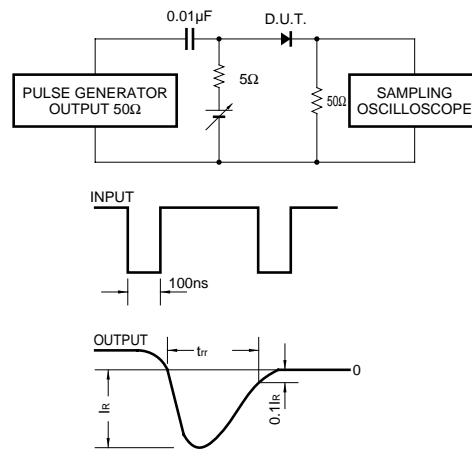


Fig. 8 Reverse recovery time (tr) measurement circuit