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

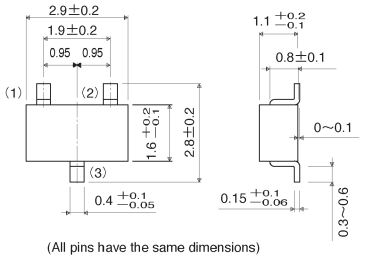
Silicon epitaxial planar

●Marking

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

●External dimensions (Units: mm)

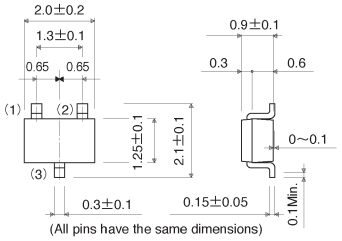
DAN202K / DAP202K / DAN212K



(All pins have the same dimensions)

ROHM : SMD3
EIAJ : SC - 59

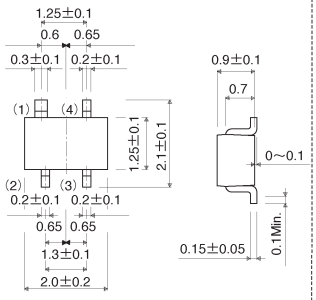
DA114 / DAN202U / DAP202U



(All pins have the same dimensions)

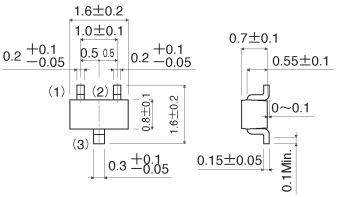
ROHM : UMD3
EIAJ : SC - 70
JEDEC : SOT - 323

DA227



ROHM : UMD4
EIAJ : SC - 82
JEDEC : SOT - 343

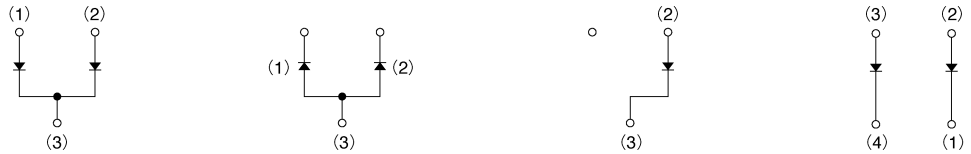
DA121 / DAN222 / DAP222



ROHM : EMD3
EIAJ : SC - 75

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●Equivalent circuits



DAN202K
DAN202U
DAN222

DAP202K
DAP202U
DAP222

DA114
DA121
DAN212K

DA227

●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 Tj (℃)	Storage temperature Tstg (℃)	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

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●Electrical characteristics (Ta = 25°C)

Type	Forward voltage		Reverse current		Capacitance between terminals			Reverse recovery time		
	V_F (V) Max.	Cond. I_F (mA)	I_R (μA) Max.	Cond. V_R (V)	C_T (pF) Max.	Cond. V_R (V)	Cond. f (MHz)	t_{rr} (ns) Max.	Cond. V_R (V)	Cond. 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)

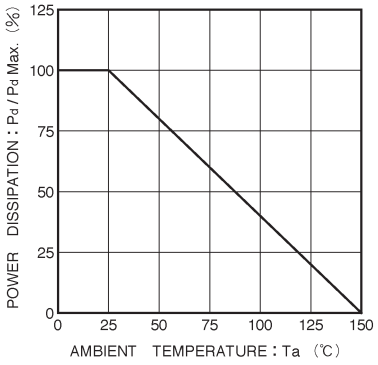


Fig. 1 Derating curve
(mounting on glass epoxy PCBs)

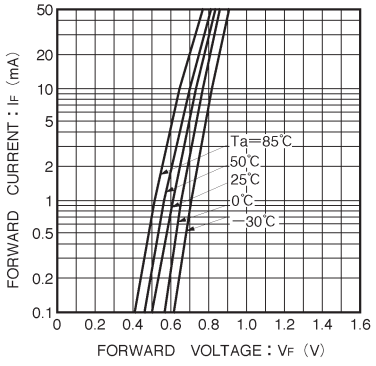


Fig. 2 Forward current vs. forward voltage
(P TYPE)

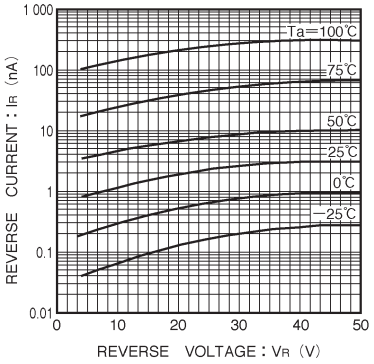


Fig. 3 Reverse current vs. reverse voltage
(P TYPE)

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

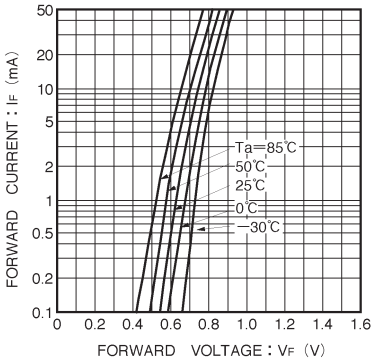


Fig. 4 Forward current vs. forward voltage (N TYPE)

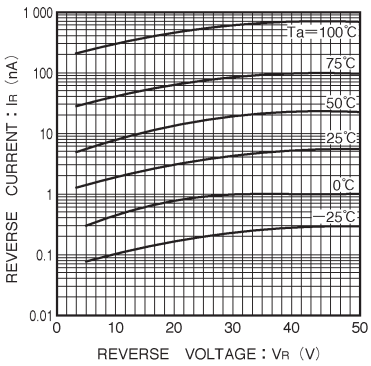


Fig. 5 Reverse current vs. reverse voltage (N TYPE)

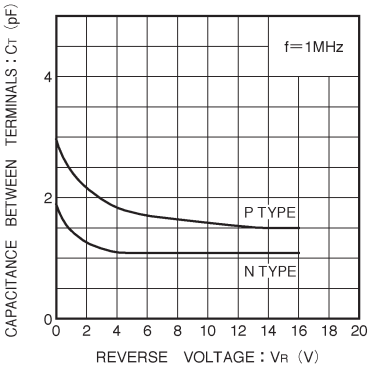


Fig. 6 Capacitance between terminals vs. reverse voltage

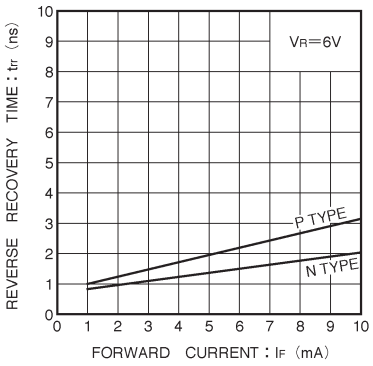


Fig. 7 Reverse recovery time vs. forward current

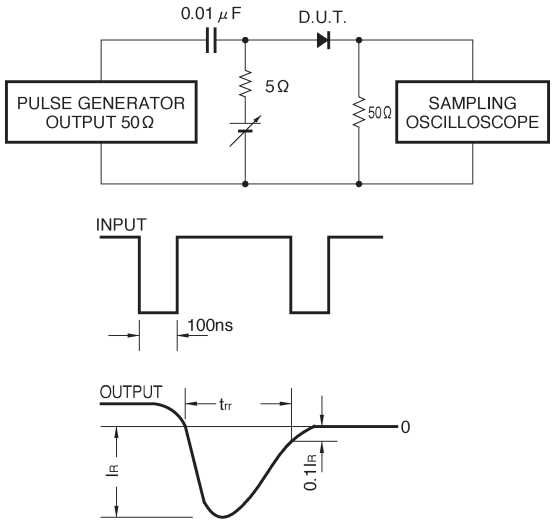


Fig. 8 Reverse recovery time (t_{rr}) measurement circuit

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