Switching diode

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 speed. (t_{rr}=1.5ns Typ.)
3) Suitable for high packing density layout.
4) High reliability.

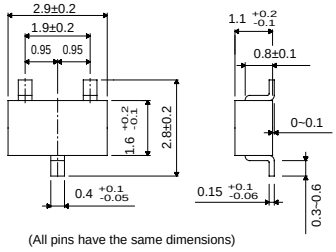
●Construction
Silicon epitaxial planar

●Marking

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

●External dimensions (Units : mm)

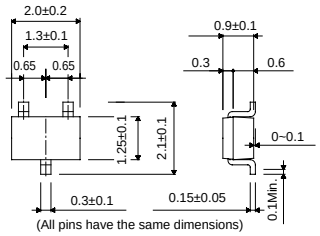
DAN202K / DAP202K / DAN212K



(All pins have the same dimensions)

ROHM : SMD3
EIAJ : SC - 59
JEDEC : SOT - 346

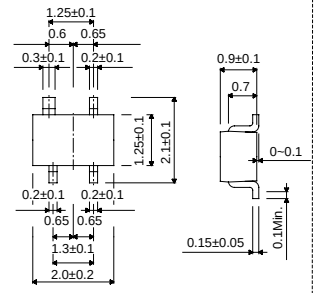
DA114 / DAN202U / DAP202U



(All pins have the same dimensions)

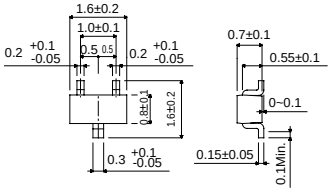
ROHM : UMD3
EIAJ : SC - 70
JEDEC : SOT - 323

DA227



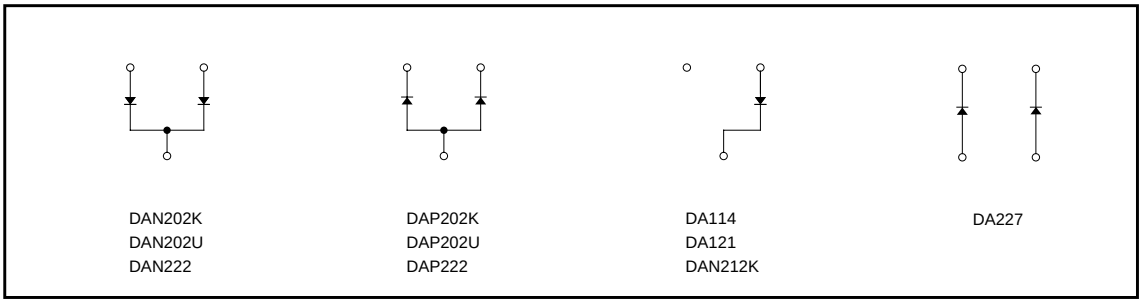
ROHM : UMD4
EIAJ : SC - 82
JEDEC : SOT - 343

DA121 / DAN222 / DAP222



ROHM : EMD3
EIAJ : SC - 75
JEDEC : SOT - 416

●**Circuit**



●**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) Pd(mW)	Junction temperature Tj (ºC)	Storage temperature Tstg (ºC)	P / N 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	200	150	–55~+150	N
DAP202U	80	80	300	100	4	200	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_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)

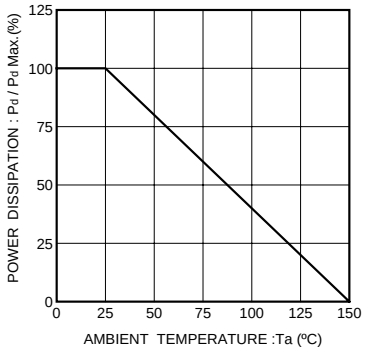


Fig. 1 Derating curve (mounting on glass epoxy PCBs)

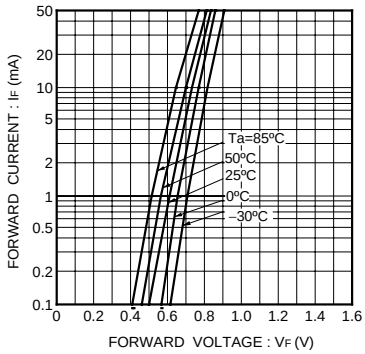


Fig. 2 Forward current vs. forward voltage (P Type)

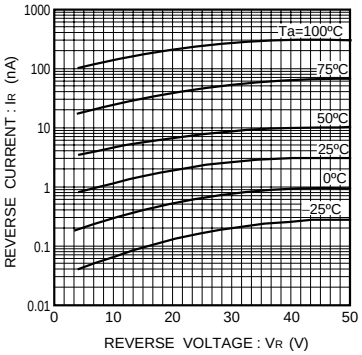


Fig. 3 Reverse current vs. reverse voltage (P Type)

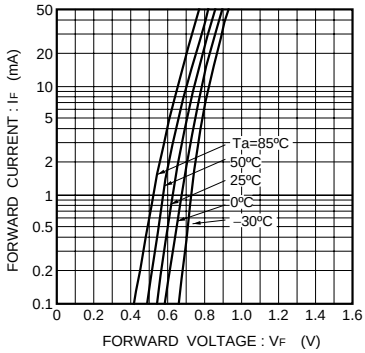


Fig. 4 Forward current vs. forward voltage (N Type)

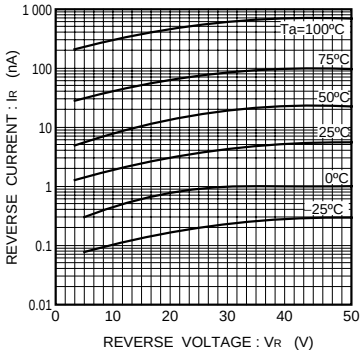


Fig. 5 Reverse current vs. reverse voltage (N Type)

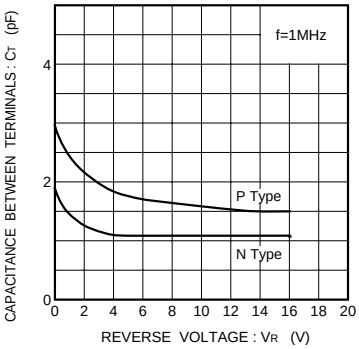


Fig. 6 Capacitance between terminals vs. reverse voltage

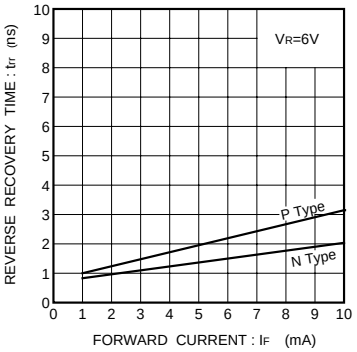


Fig. 7 Reverse recovery time vs. forward current

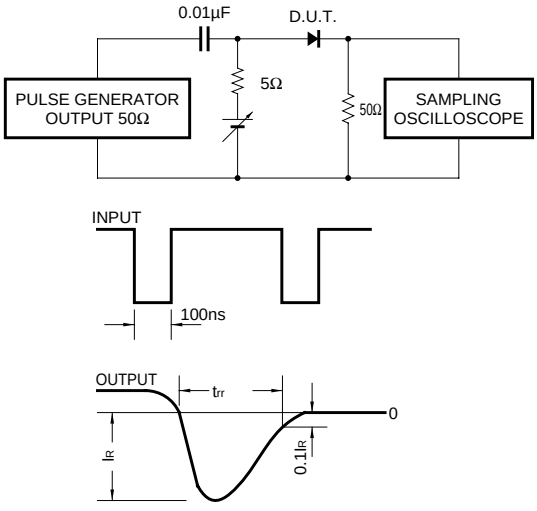


Fig. 8 Reverse recovery time (t_{rr}) measurement circuit