Ultra high–speed switching diode array

FMN1 / FMP1 / IMN10 / IMN11 / IMP11
UMN1N / UMP1N / UMN11N / UMP11N

●Applications

Ultra high speed switching

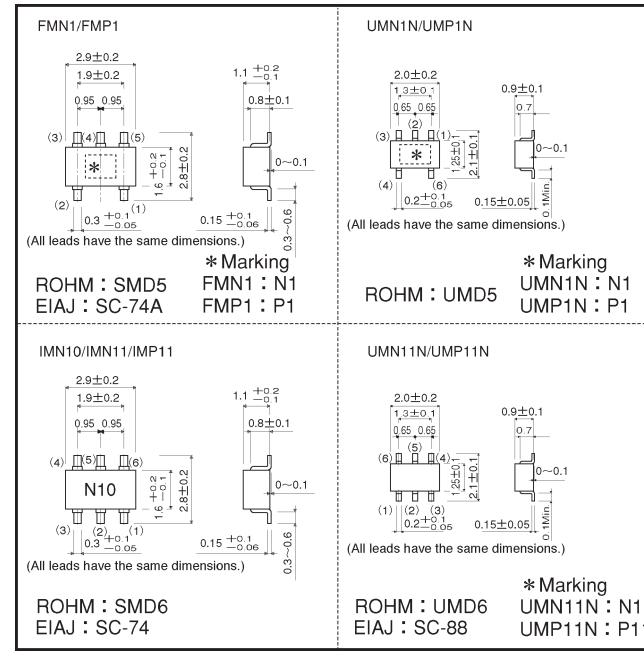
●Features

1) Multiple diodes in one small surface mount package.
2) A wide variety of configurations are available.
3) Diode characteristics are matched in the package.

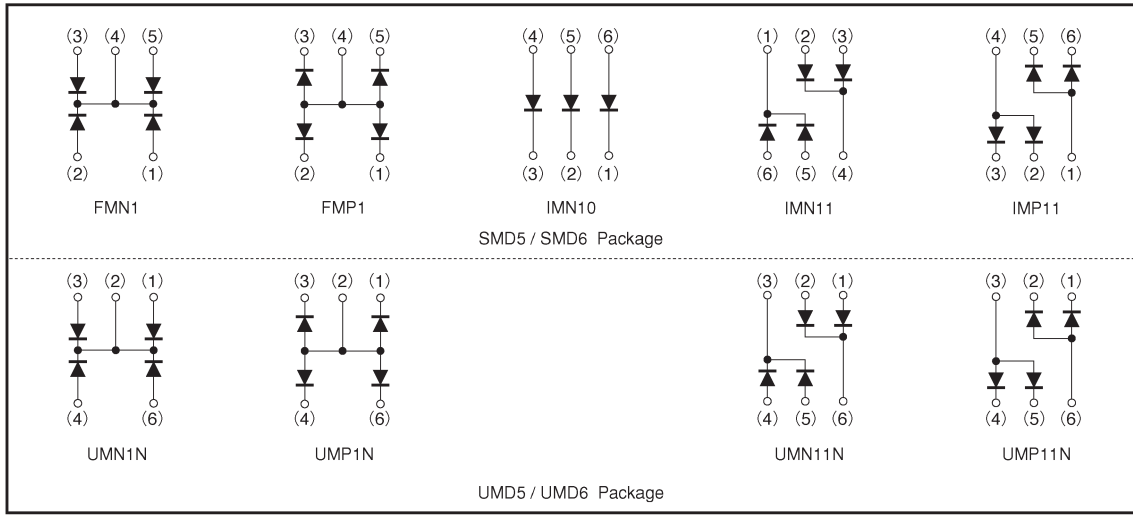
●Construction

Silicon epitaxial planar

●External dimensions (Units: mm)



●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 (1 μs) I_{surge} (A)	Power dissipation (TOTAL) Pd (mW)	Junction temperature T_j (°C)	Storage temperature T_{stg} (°C)
FMN1 UMN1N	80	80	80	25	0.25	150/80	150	−55～+150
FMP1 UMP1N	80	80	80	25	0.25	150/80	150	−55～+150
IMN10	80	80	300	100	4	300 *	150	−55～+150
IMN11 UMN11N	80	80	300	100	4	300 */150	150	−55～+150
IMP11 UMP11N	80	80	300	100	4	300 */150	150	−55～+150

* Not to exceed 200 mW per element.

●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)
FMN1 UMN1N	0.9	5	0.1	70	3.5	6	1	4	6	5
FMP1 UMP1N	0.9	5	0.1	70	3.5	6	1	4	6	5
IMN10	1.2	100	0.1	70	3.5	6	1	4	6	5
IMN11 UMN11N	1.2	100	0.1	70	3.5	6	1	4	6	5
IMP11 UMP11N	1.2	100	0.1	70	3.5	6	1	4	6	5

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

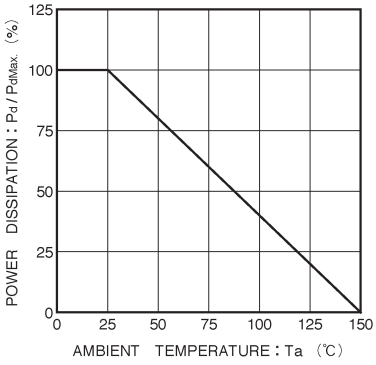


Fig. 1 Power reduction curve

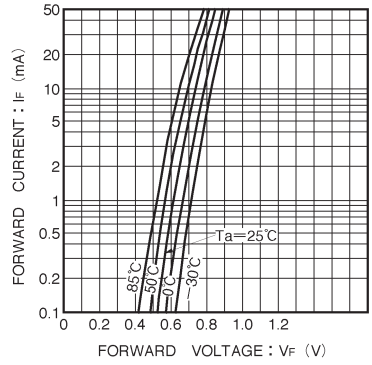


Fig. 2 Forward current vs. forward voltage (P TYPE)

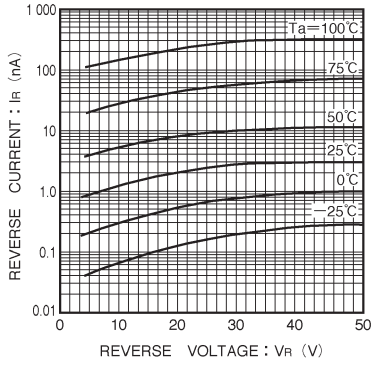


Fig. 3 Reverse current vs. reverse voltage (P TYPE)

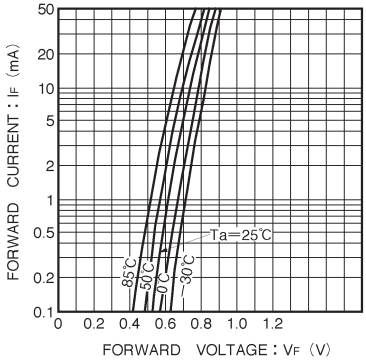


Fig. 4 Forward current vs. forward voltage (N TYPE)

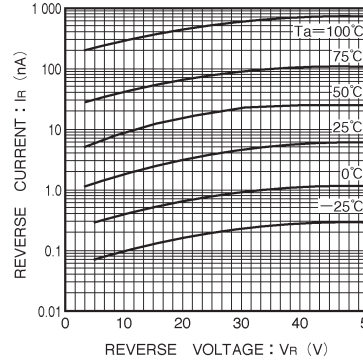


Fig. 5 Reverse current vs. reverse voltage (N TYPE)

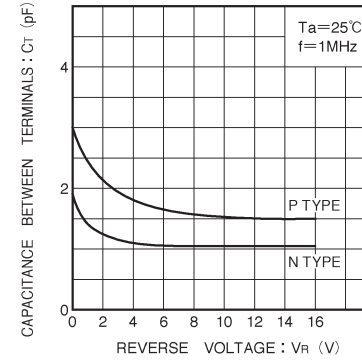


Fig. 6 Capacitance between terminals vs. reverse voltage

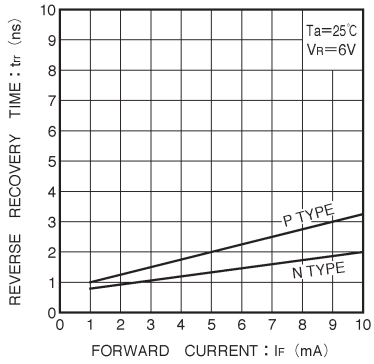


Fig. 7 Reverse recovery time vs. forward current

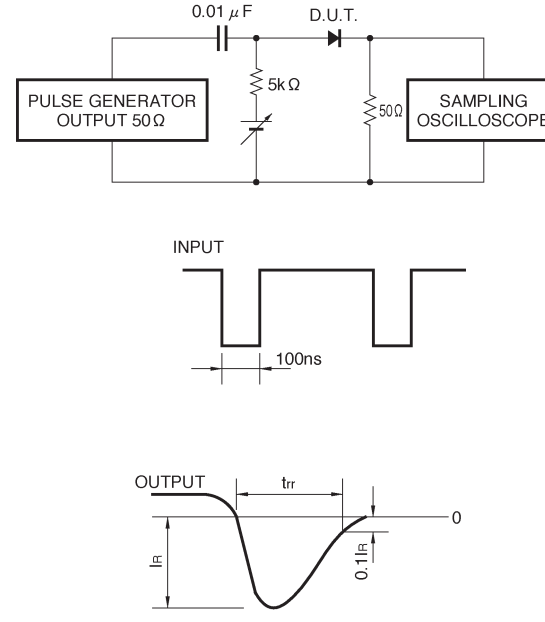


Fig. 8 Reverse recovery time (T_{rr}) measurement circuit