

Switching diode

EMN11 / EMP11 / FMN1 / FMP1 / IMN10 / IMN11 /
IMP11 / UMN1N / UMP1N / UMN11N / UMP11N

●Application

Ultra high speed switching

●Features

- 1) A wide variety of configurations are available. (EMD6, UMD5, UMD6, SMD5, SMD6)
- 2) Multiple diodes in one small surface mount package.
- 3) Diode characteristics are matched in the package.

●Construction

Silicon epitaxial planar

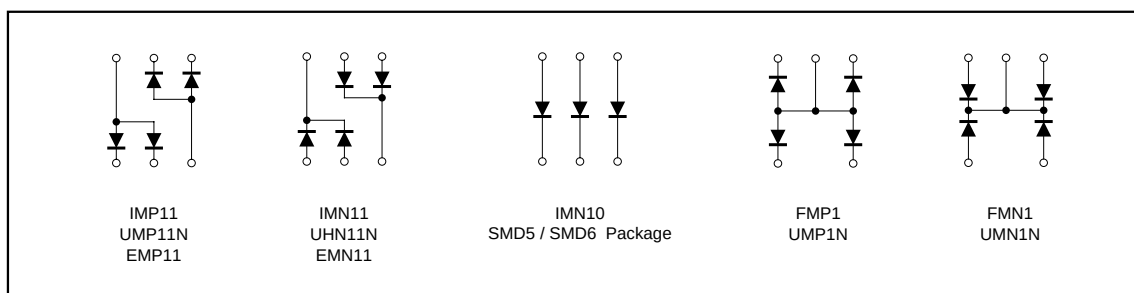
●External dimensions (Unit : mm)

	UMN1N / UMP1N (All leads have the same dimensions.) ROHM : UMD5 EIAJ : SC-88A JEDEC : SOT-353 *Marking UMN1N : N1 UMP1N : P1	FMN1 / FMP1 (All leads have the same dimensions.) ROHM : SMD5 EIAJ : SC-74A JEDEC : - *Marking FMN1 : N1 FMP1 : P1
EMN11/ EMP11 (All leads have the same dimensions.) ROHM : EMD6 EIAJ : - JEDEC : - *Marking EMN11 : N11 EMP11 : P11	UMN11N / UMP11N (All leads have the same dimensions.) ROHM : UMD6 EIAJ : SC-88 JEDEC : SOT-363 *Marking UMN11N : N11 UMP11N : P11	IMN10 / IMN11 / IMP11 (All leads have the same dimensions.) ROHM : SMD6 EIAJ : SC-74 JEDEC : SOT-457 *Marking IMN10 : N10 IMN11 : N11 IMP11 : P11

EMN11/EMP11/FMN1/FMP1/IMN10/IMN11/IMP11 UMN1N/UMP1N/UMN11N/UMP11N

Diodes

●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) Pd (mW)	Junction temperature T _j (°C)	Storage temperature T _{stg} (°C)
FMN1 UMN1N	80	80	80	25	0.25	150/80	150	-55 to +150
FMP1 UMP1N	80	80	80	25	0.25	150/80	150	-55 to +150
IMN10	80	80	300	100	4	300 *1	150	-55 to +150
IMN11 UMN11N EMN11	80	80	300	100	4	150 *2	150	-55 to +150
IMP11 UMP11N EMP11	80	80	300	100	4	150 *2	150	-55 to +150

*1 Not to exceed 200mW per element.
*2 Not to exceed 120mW per element.

●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)
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 EMN11	1.2	100	0.1	70	3.5	6	1	4	6	5
IMP11 UMP11N EMP11	1.2	100	0.1	70	3.5	6	1	4	6	5

EMN11/EMP11/FMN1/FMP1/IMN10/IMN11/IMP11 UMN1N/UMP1N/UMN11N/UMP11N

Diodes

●Electrical characteristic curves (Ta=25°C)

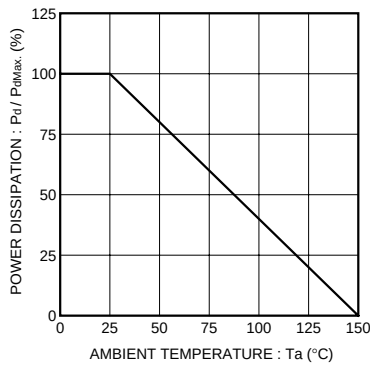


Fig.1 Power reduction curve

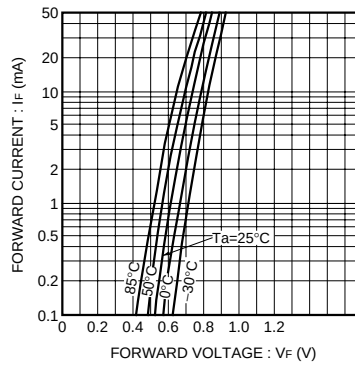


Fig.2 Forward characteristics (P Type)

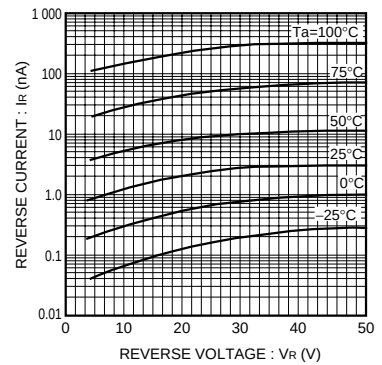


Fig.3 Reverse characteristics (P Type)

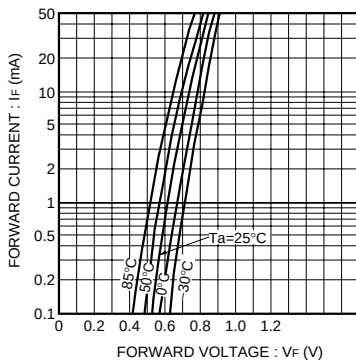


Fig.4 Forward characteristics (N Type)

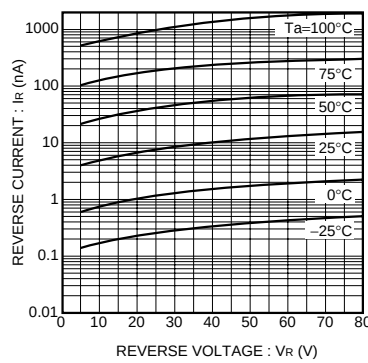


Fig.5 Reverse characteristics (N Type)

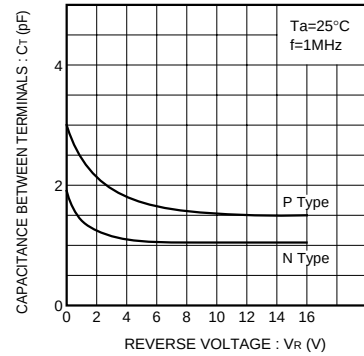


Fig.6 Capacitance between terminals characteristics

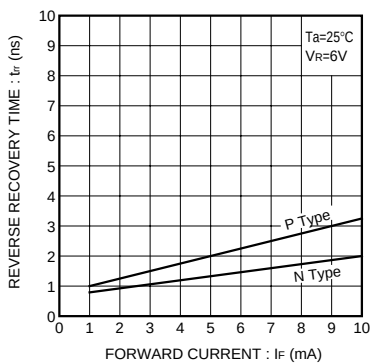


Fig.7 Reverse recovery time

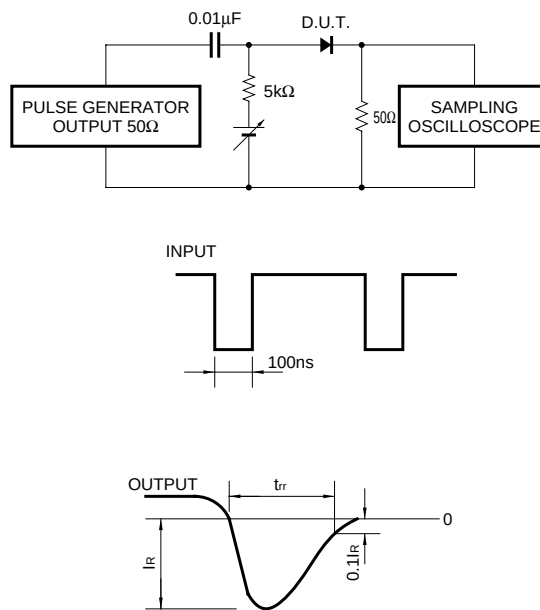


Fig.8 Reverse recovery time (t_{rr}) measurement circuit