

FMXB-2102

December, 2005

Die Structure: Silicon Planer Diode (FRD, SBD)

§1. Absolute Maximum Ratings and Electrical Characteristics

<FRD part>

•Absolute Maximum Ratings

No.	Parameter	Symbol	Unit	Rating	Conditions
1	Transient Peak Reverse Voltage	VRSM	V	200	
2	Peak Reverse Voltage	VRM	V	200	
3	Average Forward Current	IF(AV)	A	10	
4	Peak Surge Forward Current	IFSM	A	150	10msec. Half sine-wave, one shot
5	I ² t Limiting Value	I ² t	A ² S	112.5	1msec ≤ t ≤ 10msec
6	Junction Temperature	T _j	°C	-40 to +150	
7	Storage Temperature	T _{stg}	°C	-40 to +150	

•Electrical Characteristics

No.	Parameter	Symbol	Unit	Rating	Conditions
1	Forward Voltage Drop	V _F	V	0.98 max.	IF=10A
2	Reverse Leakage Current	I _R	μA	200 max.	VR=VRM
3	Reverse Leakage Current Under High Temperature	H•I _R	mA	50 max.	VR=VRM, T _j =150°C
4	Reverse Recovery Time	trr1	ns	30 max	IF=IRP=500mA 90% Recovery point
		trr2	ns	25 max	IF=500mA, IRP=1A 75% Recovery point
5	Thermal Resistance	R _{th(j-c)}	°C/W	4.0 max.	Between Junction and case

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<SBD part>

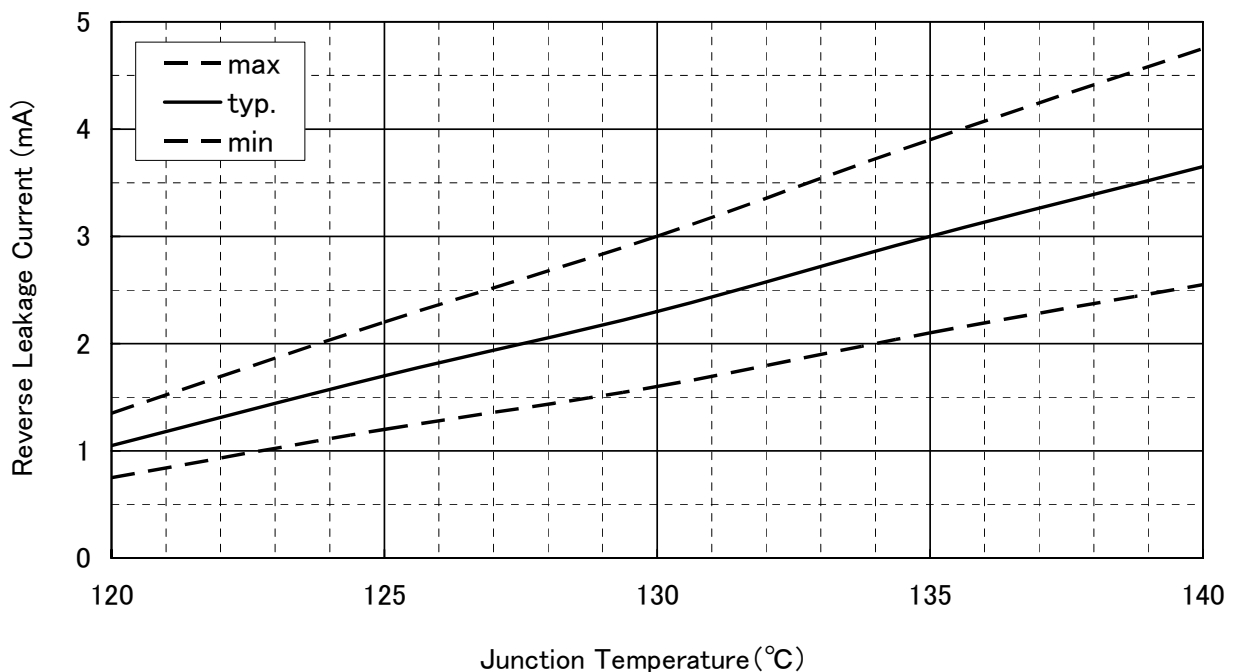
•Absolute Maximum Ratings

No.	Parameter	Symbol	Unit	Rating	Conditions
1	Transient Peak Reverse Voltage	VRSM	V	90	
2	Peak Reverse Voltage	VRM	V	90	
3	Junction Temperature	Tj	°C	-40 to +150	
4	Storage Temperature	Tstg	°C	-40 to+150	

•Electrical Characteristics

No.	Parameter	Symbol	Unit	Rating			Conditions
				min.	typ.	max.	
1	Reverse Leakage Current	I _{R1}	μA	-	-	100	V _R =15V
		I _{R2}	mA	-	-	2.0	V _R =90V
2	Reverse Leakage Current Under High Temperature	H•I _{R1}	mA	1.60	2.30	3.00	V _R =15V, T _j =130°C
		H•I _{R2}	mA	-	-	55	V _R =90V, T _j =150°C

IR—Tj Characteristics of SBD at 15V

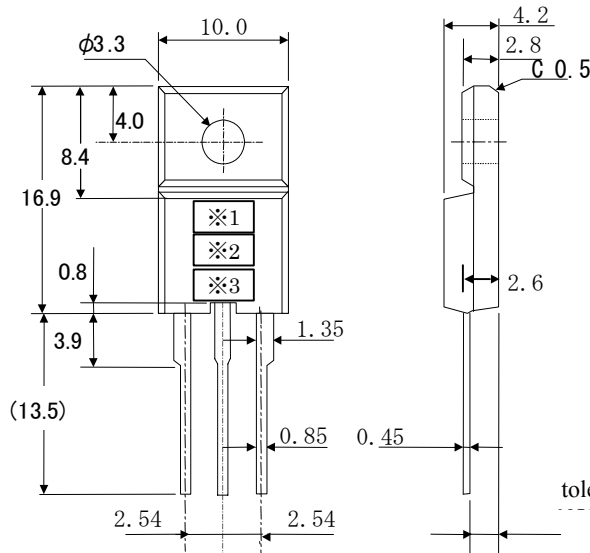


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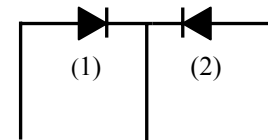
§2. Package information

2-1 Package type, physical dimensions and material



Internal layout

(1) Temperature detection SBD (2) FRD



Unit: mm

2-2 Marking

Part Number	Marking		
	Type Name	Polarity	Lot number
FMXB-2102	XB2102		1st letter: Last digit of year 2nd letter: Month From 1 to 9 for Jan. to Sep., O for Oct., N for Nov., D for Dec. 3rd & 4th letter: Day e.g.: 5N28 (November 28, 2005)

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