MA4X746 (MA746)

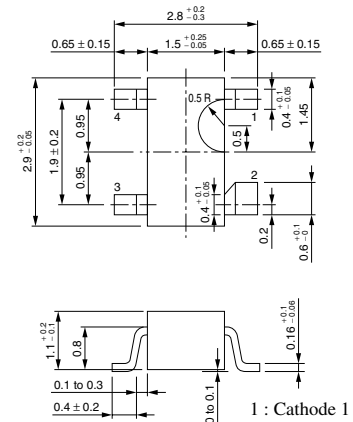
Silicon epitaxial planar type

For super-high speed switching circuit
For small current rectification

■ Features

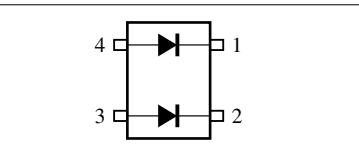
- $I_{F(AV)}$ = 200 mA, and V_R > 50 V is achieved
- Allowing automatic insertion with the emboss taping
- Optimum for high-frequency rectification because of its short reverse recovery time (t_{rr})
- High rectification efficiency caused by its low forward-rise-voltage (V_F)

Unit : mm



Marking Symbol: M3M

Internal Connection



■ Absolute Maximum Ratings T_a = 25°C

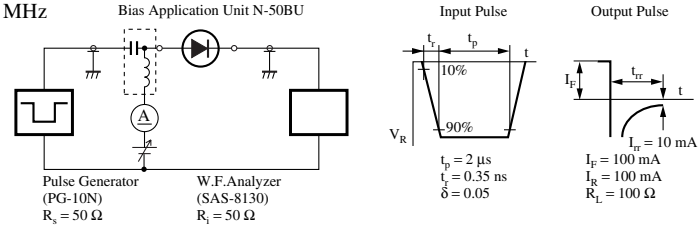
Parameter		Symbol	Rating	Unit
Reverse voltage (DC)		V_R	50	V
Repetitive peak reverse voltage		V_{RRM}	50	V
Non repetitive peak forward current*2	Single	I_{FSM}	1	A
	Double*1		0.75	
Peak forward current	Single	I_{FM}	300	mA
	Double*1		225	
Average forward current	Single	$I_{F(AV)}$	200	mA
	Double*1		150	
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	−55 to +150	°C

Note) *1 : Value per chip
*2 : The peak-to-peak value in one cycle of 50 Hz sine-wave (non-repetitive)

■ Electrical Characteristics T_a = 25°C

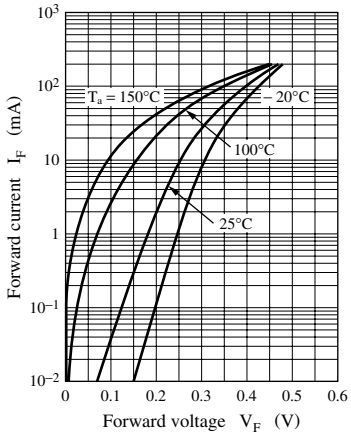
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current (DC)	I_R	V_R = 50 V			200	μA
Forward voltage (DC)	V_{F1}	I_F = 30 mA			0.36	V
	V_{F2}	I_F = 200 mA			0.55	V
Terminal capacitance	C_t	V_R = 0 V, f = 1 MHz		30		pF
Reverse recovery time*	t_{rr}	I_F = I_R = 100 mA I_{rr} = 10 mA, R_L = 100 Ω		3.0		ns

Note) 1. Schottky barrier diode is sensitive to electric shock (static electricity, etc.). Due attention must be paid on the charge of a human body and the leakage of current from the operating equipment.
2. Rated input/output frequency: 2 000 MHz
3. * : t_{rr} measuring instrument

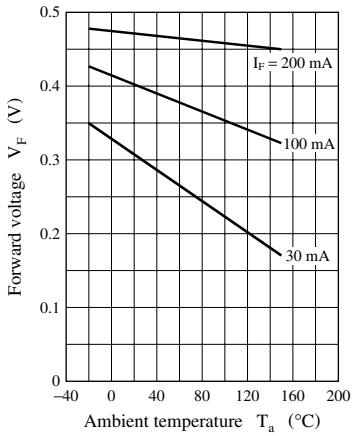


Note) The part number in the parenthesis shows conventional part number.

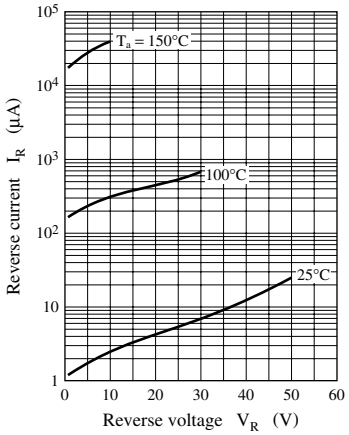
I_F — V_F



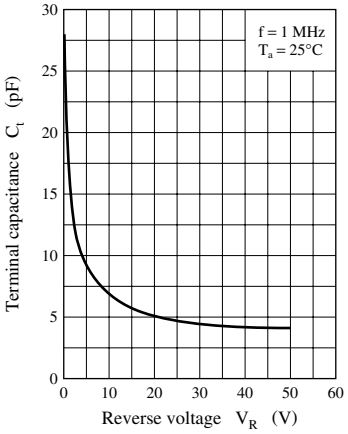
V_F — T_a



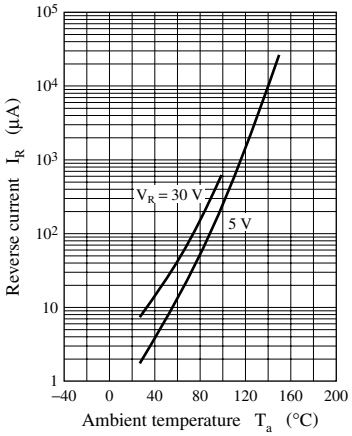
I_R — V_R



C_t — V_R



I_R — T_a



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