MA3X701 (MA10701)

Silicon epitaxial planar type

For high frequency rectification

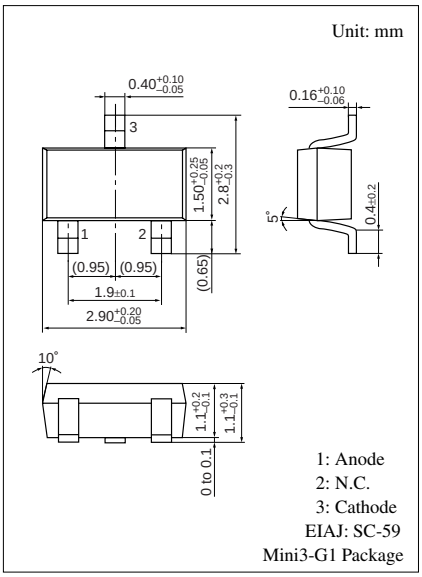
■ Features

- $I_{F(AV)}$ = 700 mA rectification is possible
- Mini type 3-pin package

■ Absolute Maximum Ratings T_a = 25°C

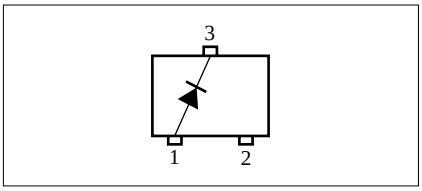
Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	V_R	30	V
Repetitive peak reverse-voltage	V_{RRM}	30	V
Average forward current	$I_{F(AV)}$	700	mA
Non-repetitive peak forward-surge-current *	I_{FSM}	5	A
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	−55 to +150	°C

Note) ∗: The peak-to-peak value in one cycle of 50 Hz sine wave (non-repetitive)



Marking Symbol: M4P

Internal Connection



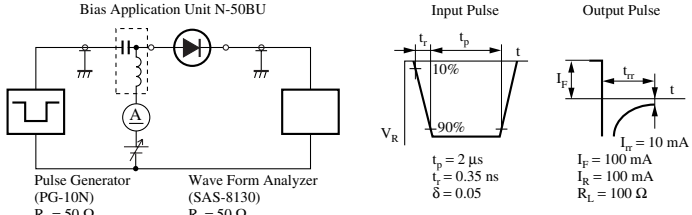
■ Electrical Characteristics T_a = 25°C

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current (DC)	I_R	V_R = 30 V			80	μA
Forward voltage (DC)	V_F	I_Z = 700 mA			0.55	V
Terminal capacitance	C_t	V_R = 0 V, f = 1 MHz		120		pF
Reverse recovery time *2	t_{rr}	$I_F = I_R$ = 100 mA I_{rr} = 10 mA, R_L = 100 Ω		7.5		ns
High voltage rectification (1)	R_{th}(j-a)(1)			420		°C/W
High voltage rectification (2) *1	R_{th}(j-a)(2)			330		°C/W

Note) 1. This product 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.

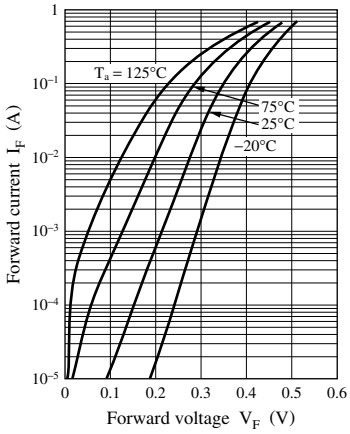
2. Rated input/output frequency: 400 MHz

3. ∗1: Mounted on the printed circuit board (copper foil area 0.8 mm × 20 mm)
   ∗2: t_{rr} measuring instrument

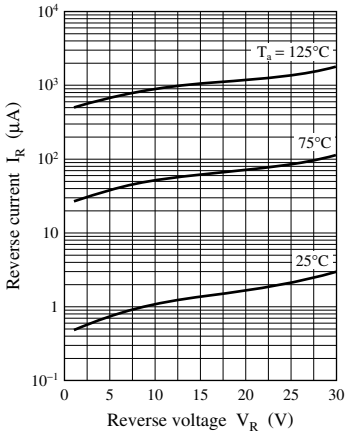


Note) The part number in the parenthesis shows conventional part number.

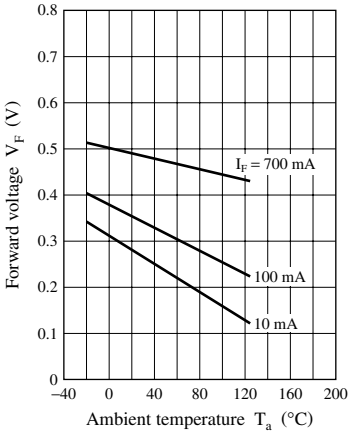
I_F — V_F



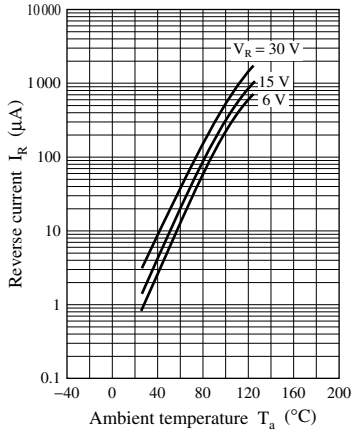
I_R — V_R



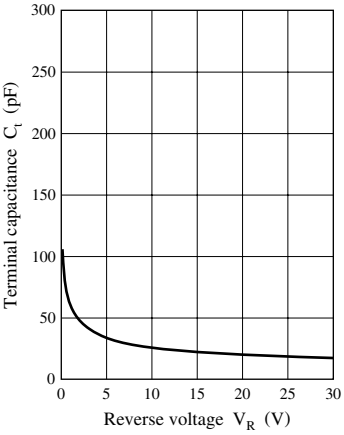
V_F — T_a



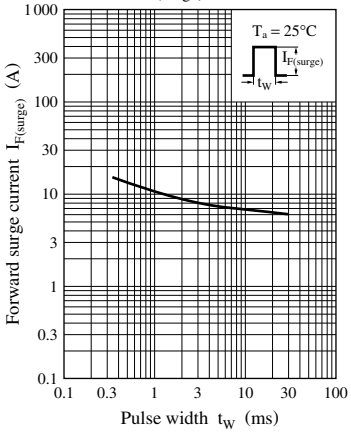
I_R — T_a



C_t — V_R



$I_{F(surge)}$ — t_W



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