

# MA3X701 (MA10701)

## Silicon epitaxial planar type

For high-frequency rectification

### ■ Features

- Mini type 3-pin package
- Allowing to rectify under ( $I_{F(AV)} = 700$  mA) condition

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

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	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

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

### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

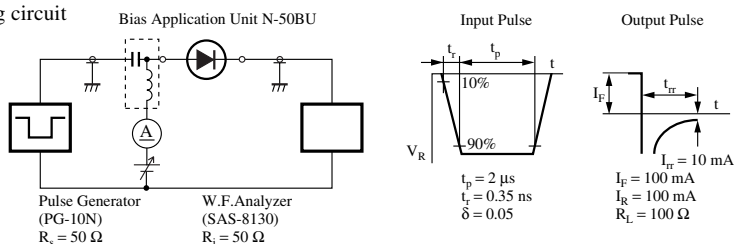
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current (DC)	$I_R$	$V_R = 30$ V			80	$\mu\text{A}$
Forward voltage (DC)	$V_F$	$I_Z = 700$ mA			0.55	V
Terminal capacitance	$C_t$	$V_R = 0$ V, $f = 1$ MHz		120		pF
Reverse recovery time*2	$t_{rr}$	$I_F = I_R = 100$ mA $I_{rr} = 10$ mA, $R_L = 100$ $\Omega$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

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.

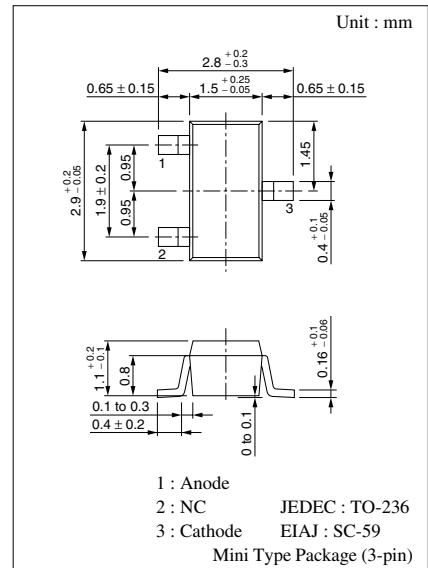
2. Rated input/output frequency: 400 MHz

3. \*1 : Obtained by fixing the element to the printed-circuit board (copper foil area 0.8 mm  $\times$  20 mm)

\*2 :  $t_{rr}$  measuring circuit

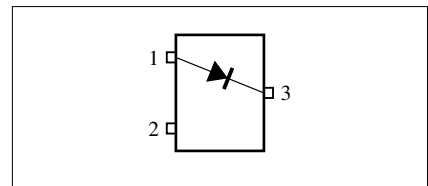


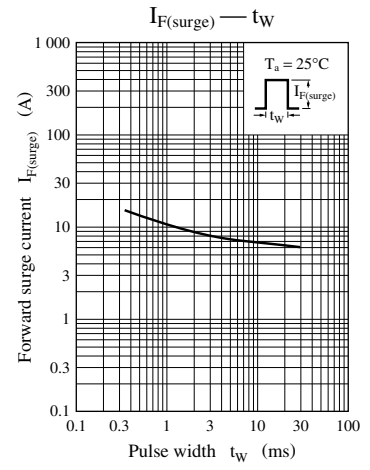
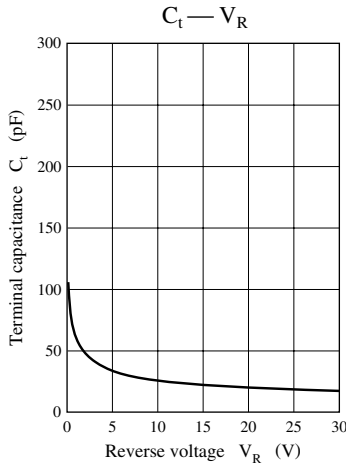
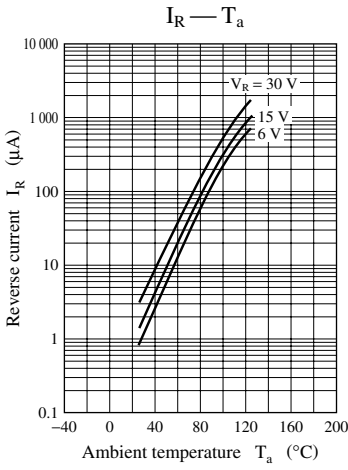
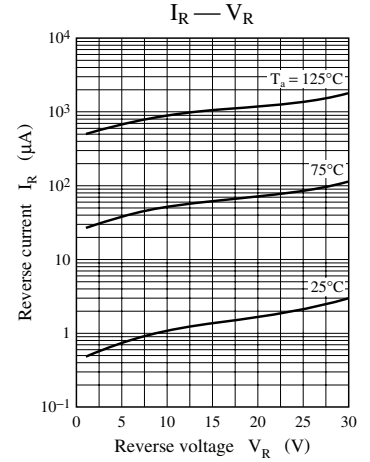
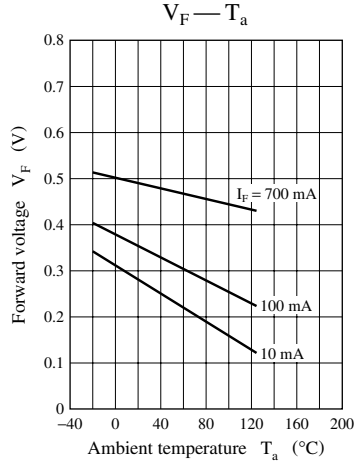
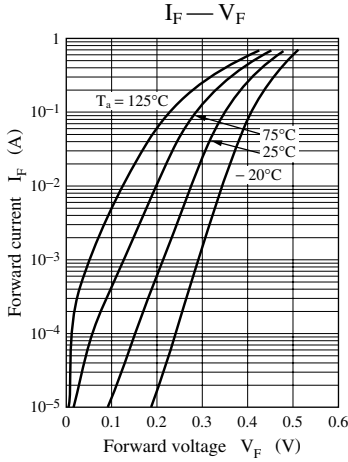
Note) The part number in the parenthesis shows conventional part number.



Marking Symbol: M4P

Internal Connection





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