

# MA3S781 (MA781)

## Silicon epitaxial planar type

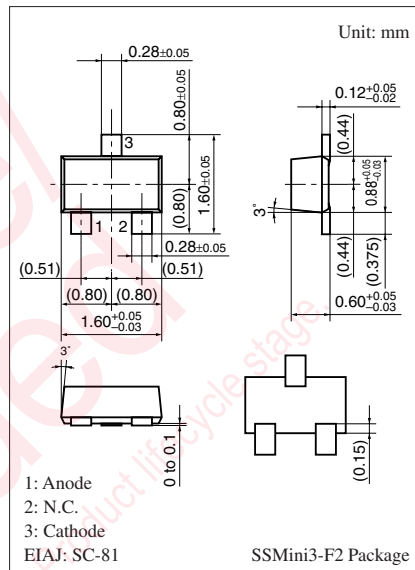
For switching

### ■ Features

- High-density mounting is possible
- Optimum for high frequency rectification because of its short reverse recovery time  $t_{rr}$
- Low forward voltage  $V_F$  and good rectification efficiency

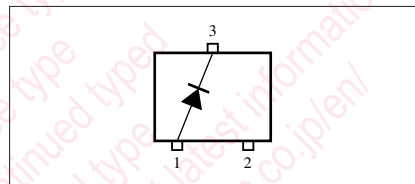
### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Reverse voltage	$V_R$	30	V
Maximum peak reverse voltage	$V_{RM}$	30	V
Forward current	$I_F$	30	mA
Peak forward current	$I_{FM}$	150	mA
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$



Marking Symbol: M1L

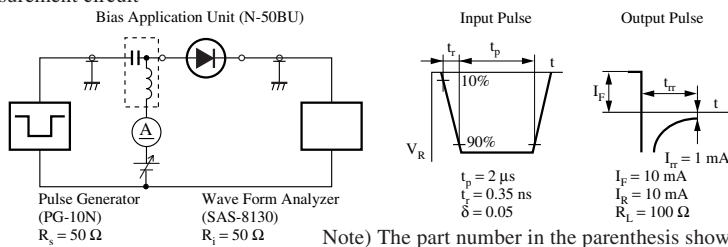
Internal Connection



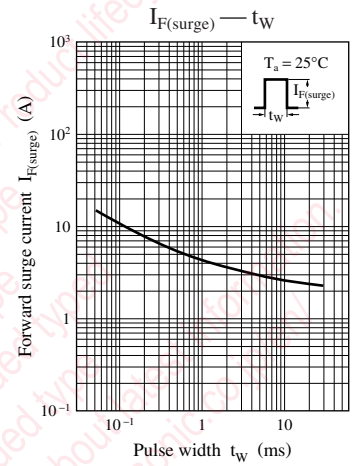
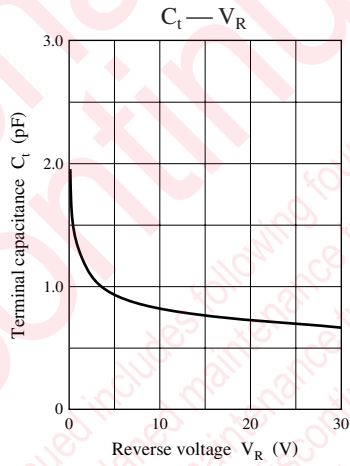
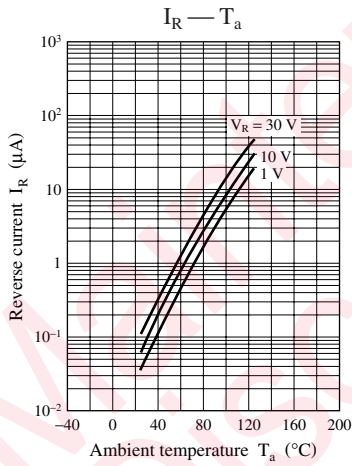
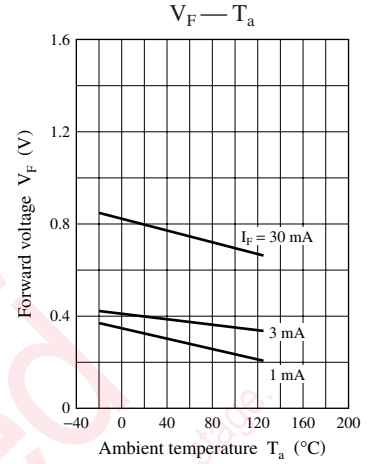
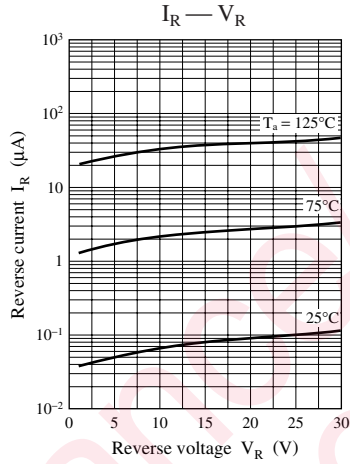
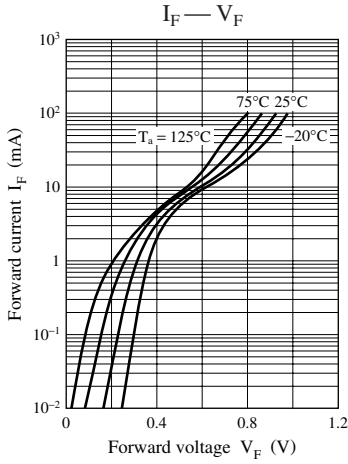
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	$V_{F1}$	$I_F = 1 \text{ mA}$			0.4	V
	$V_{F2}$	$I_F = 30 \text{ mA}$			1.0	
Reverse current	$I_R$	$V_R = 30 \text{ V}$			300	nA
Terminal capacitance	$C_t$	$V_R = 1 \text{ V}, f = 1 \text{ MHz}$		1.5		pF
Reverse recovery time *	$t_{rr}$	$I_F = I_R = 10 \text{ mA}$ $I_{tr} = 1 \text{ mA}, R_L = 100 \Omega$		1.0		ns
Detection efficiency	$\eta$	$V_{IN} = 3 \text{ V (peak)}, f = 30 \text{ MHz}$ $R_L = 3.9 \text{ k}\Omega, C_L = 10 \text{ pF}$		65		%

- Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.  
 2. 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.  
 3. Absolute frequency of input and output is 2 GHz.  
 4. \*:  $t_{rr}$  measurement circuit



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



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take into the consideration of incidence of break down and failure  
n the systems such as redundant design, arresting the spread of fire  
al injury, fire, social damages, for example, by using the products.

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