

# MA3X748 (MA748)

## Silicon epitaxial planar type

For high frequency rectification

### ■ Features

- Low  $V_F$  type of MA3X720 (MA720)
- Low forward voltage  $V_F$  and good rectification efficiency
- Optimum for high frequency rectification because of its short reverse recovery time  $t_{rr}$

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

Parameter	Symbol	Rating	Unit
Reverse voltage	$V_R$	20	V
Repetitive peak reverse voltage	$V_{RRM}$	20	V
Forward current (Average)	$I_{F(AV)}$	500	mA
Non-repetitive peak forward surge current *	$I_{FSM}$	3	A
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$

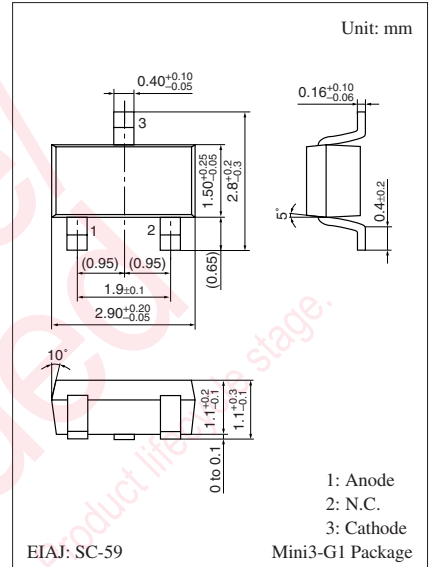
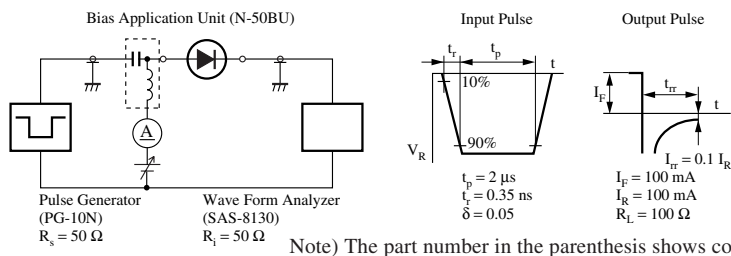
Note) \*: The peak-to-peak value in one cycle of 50 Hz sine wave (non-repetitive)

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	$V_{F1}$	$I_F = 10 \text{ mA}$			0.3	V
	$V_{F2}$	$I_F = 500 \text{ mA}$			0.5	V
Reverse current	$I_R$	$V_R = 10 \text{ V}$			30	$\mu\text{A}$
Terminal capacitance	$C_t$	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$		60		pF
Reverse recovery time *	$t_{rr}$	$I_F = I_R = 100 \text{ mA}$ $I_{rr} = 0.1 I_R, R_L = 100 \Omega$		5		ns

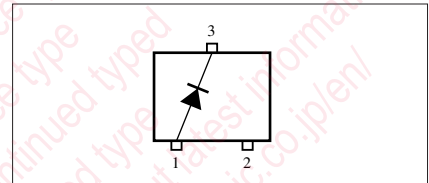
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

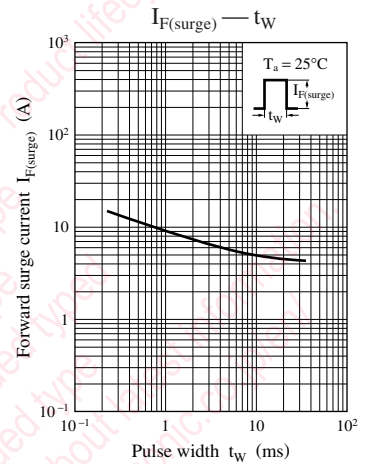
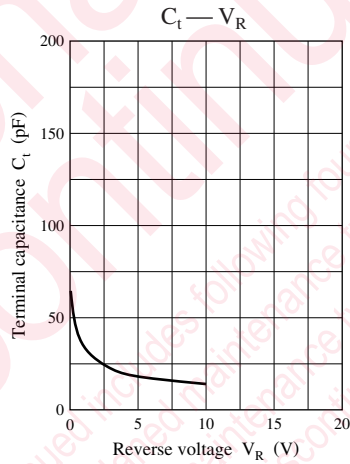
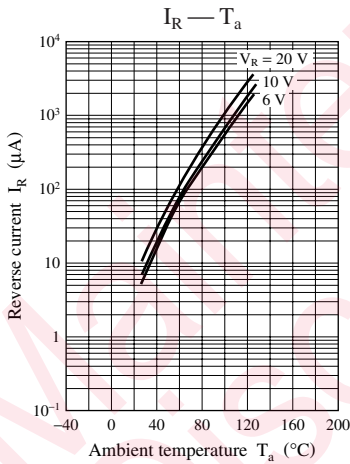
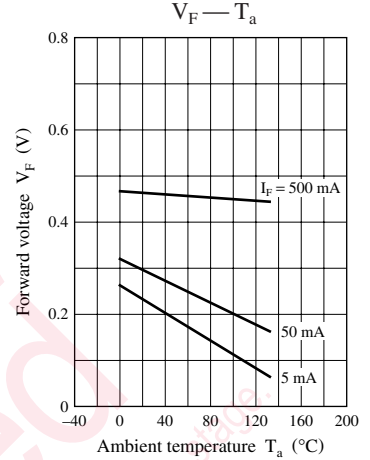
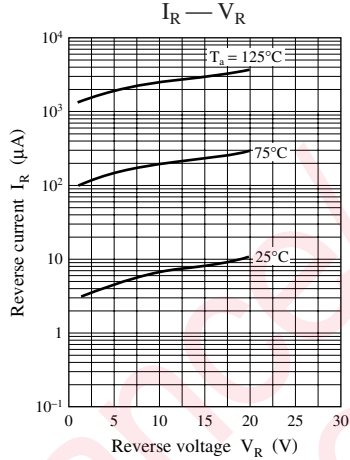
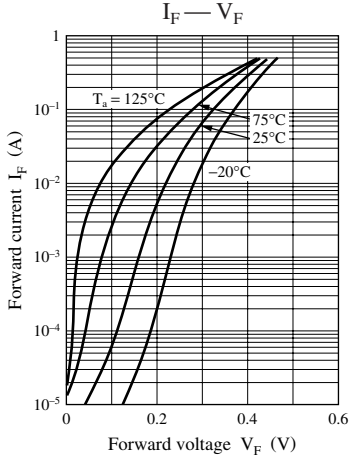
2. This product is sensitive to electric shock (static electricity, etc.). Due attention must be paid on the charge of a human body and the leakage of current from the operating equipment.
3. Absolute frequency of input and output is 400 MHz.
4. \*:  $t_{rr}$  measurement circuit



Marking Symbol: M4E

Internal Connection





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