

# MA4X713 (MA713)

Silicon epitaxial planar type

For switching

For wave detection

## ■ Features

- Two isolated elements are contained in one package, allowing high-density mounting
- Two MA3X704A (MA704A) is contained in one package (of a type in the same direction)
- Low forward voltage  $V_F$ , optimum for low voltage rectification
- Optimum for high frequency rectification because of its short reverse recovery time ( $t_{rr}$ )
- Mini type 4-pin package

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

Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	$V_R$	30	V
Peak forward current	$I_{FM}$	150	mA
current *	$I_{FM}$	110	
Forward current (DC)	$I_F$	30	mA
Double *	$I_F$	20	
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$

Note) \*: Value per chip

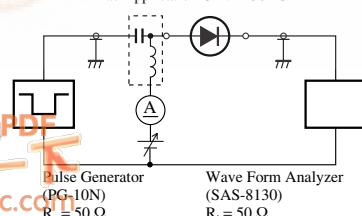
## ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

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

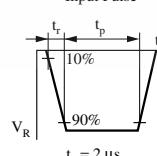
Note) 1. This product is sensitive to electric shock (static electricity, etc.). Due attention must be paid on the charge of a human body and the leakage of current from the operating equipment.

2. Rated input/output frequency: 200 MHz 3. \*:  $t_{rr}$  measuring instrument

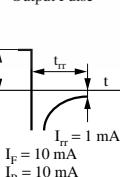
Bias Application Unit N-50BU



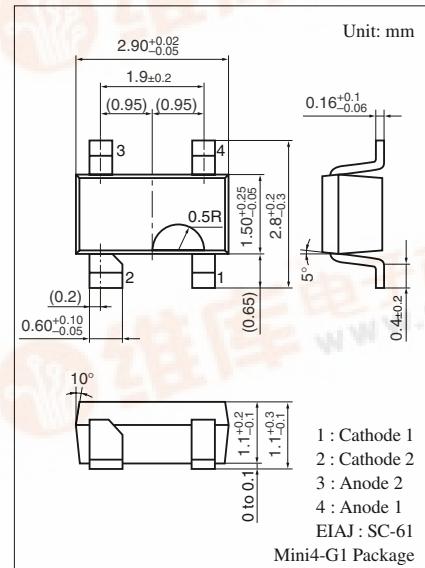
Input Pulse



Output Pulse

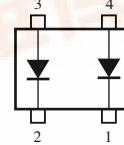


Note) The part number in the parenthesis shows conventional part number.

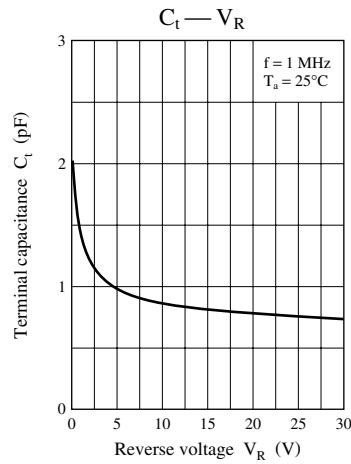
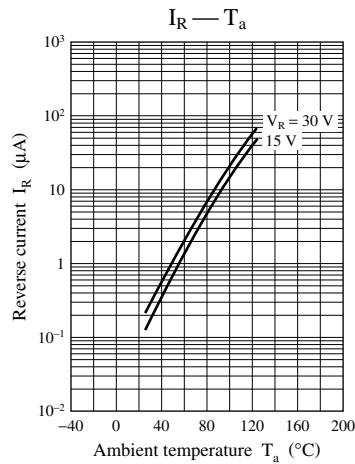
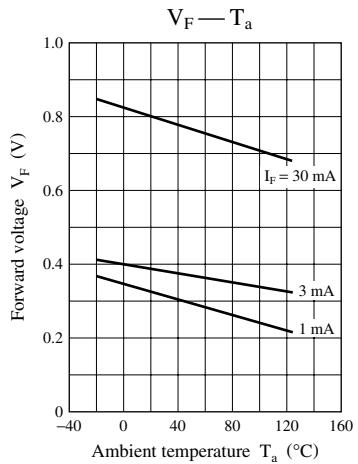
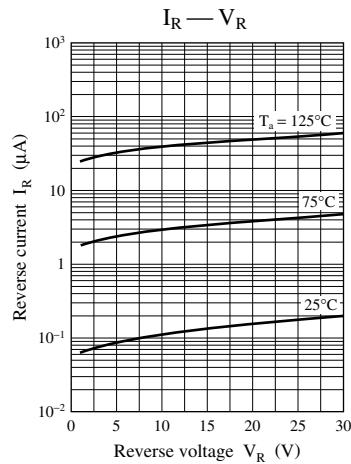
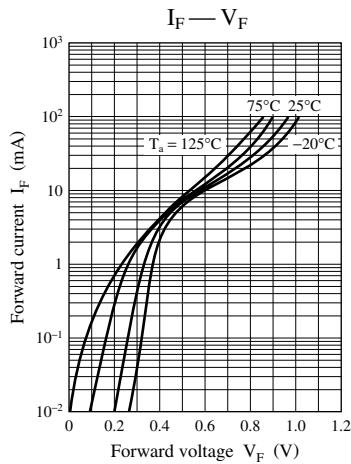


Marking Symbol: M1N

Internal Connection



## Characteristics charts between pins 1 and 4, 2 and 3



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