

MA713

Silicon epitaxial planer type

For the switching circuit

For wave detection circuit

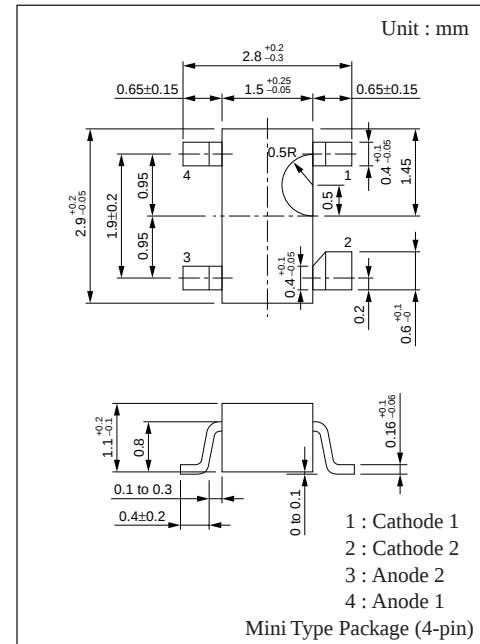
■ Features

- Two elements are incorporated in MA704A (of a type in the same direction)
- Low forward rise voltage V_F , optimum for low-voltage rectification
- Fast reverse recovery time t_{rr} , optimum for high-frequency rectification

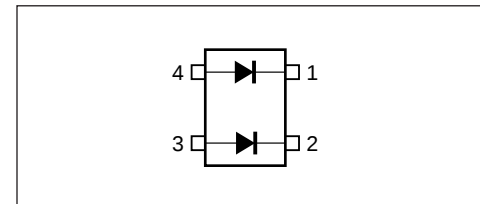
■ Absolute Maximum Ratings (Ta= 25°C)

Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	V_R	30	V
Peak forward current	Single	150	mA
	Double	110*	
Forward current (DC)	Single	30	mA
	Double	20*	
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	- 55 to + 125	°C

* Use value per chip



■ Internal Connection



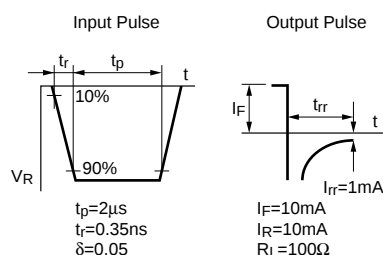
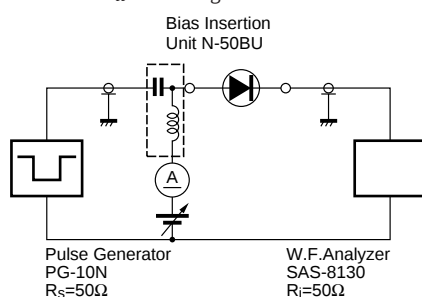
■ Electrical Characteristics (Ta= 25°C)

Parameter	Symbol	Condition	min	typ	max	Unit
Reverse current (DC)	I_R	$V_R = 30V$			1	μA
Forward voltage (DC)	V_{F1}	$I_F = 1mA$			0.4	V
	V_{F2}	$I_F = 30mA$			1.0	V
Terminal capacitance	C_t	$V_R = 1V, f = 1MHz$		1.5		pF
Reverse recovery time	t_{rr}^*	$I_F = I_R = 10mA$ $I_R = 1mA, R_L = 100\Omega$		1.0		ns
Detection efficiency	η	$V_{in} = 3V_{(peak)}, f = 30MHz$ $R_L = 3.9k\Omega, C_L = 10pF$		65		%

Note 1. Schottky barrier diode is sensitive to electric shock (static electricity, etc.). Due attention must be paid on charge of a human body and leakage from the equipment used.

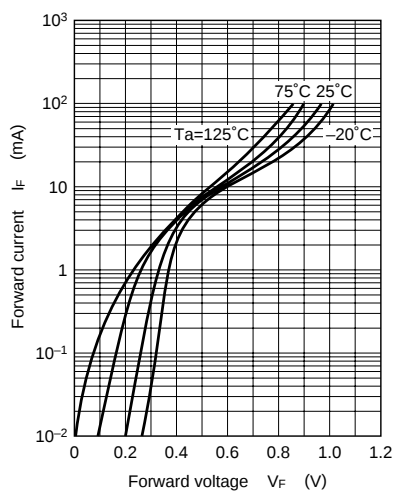
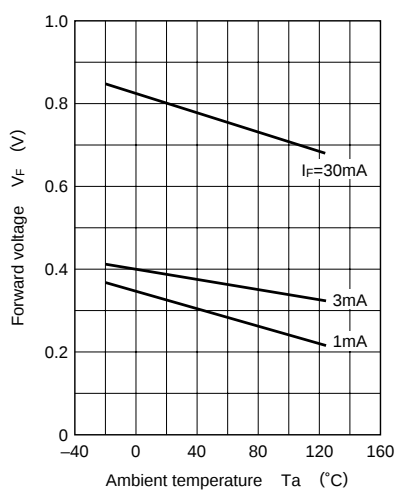
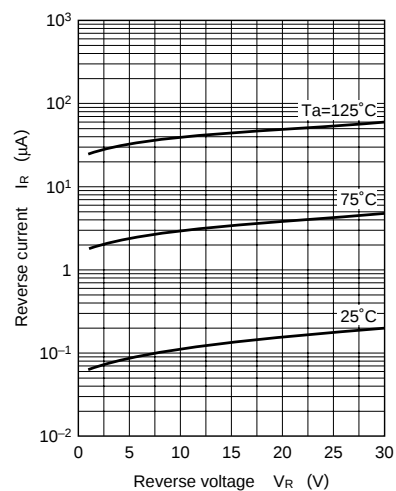
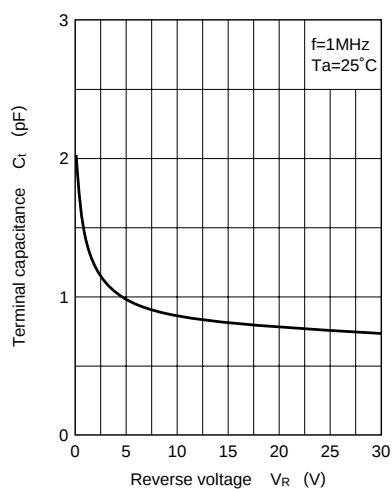
2. Rated input/output frequency : 200MHz

3. * t_{rr} measuring circuit



■ Marking



$I_F - V_F$ (Between pins 1 and 4, 2 and 3) $V_F - T_a$ (Between pins 1 and 4, 2 and 3) $I_R - V_R$ (Between pins 1 and 4, 2 and 3) $C_t - V_R$ (Between pins 1 and 4, 2 and 3) $I_R - T_a$ (Between pins 1 and 4, 2 and 3)