MA4X714

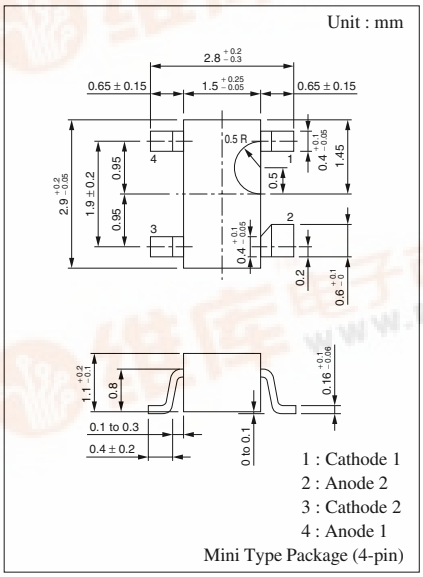
Silicon epitaxial planar type

For switching circuits

For wave detection circuit

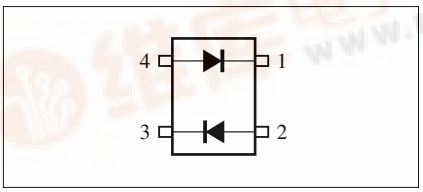
■ Features

- Two MA3X704As are contained in one package (Two diodes in a different direction)
- Optimum for low-voltage rectification because of its low forward rise voltage (V_F)
- Optimum for high-frequency rectification because of its short reverse recovery time (t_{rr})



Marking Symbol: M1P

Internal Connection



■ Absolute Maximum Ratings $T_a = 25°C$

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

Note) * : Value per chip

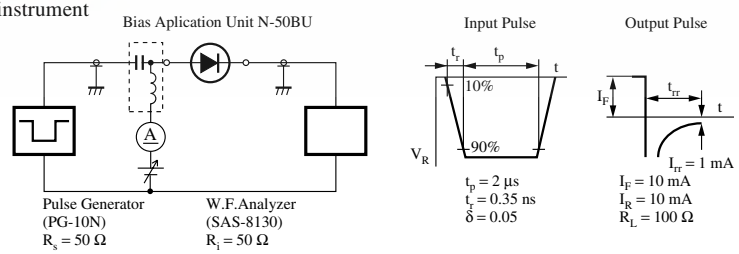
■ Electrical Characteristics $T_a = 25°C$

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

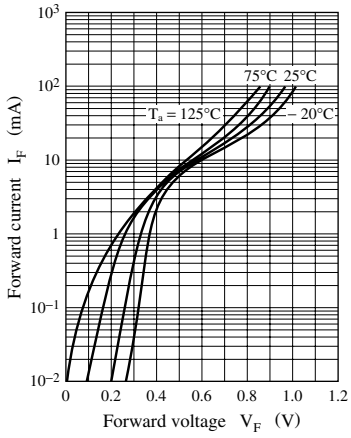
Note) 1. Schottky barrier diode is sensitive to electric shock (static electricity, etc.). Due attention must be paid on the charge of a human body and the leakage of current from the operating equipment

2. Rated input/output frequency: 2 000 MHz

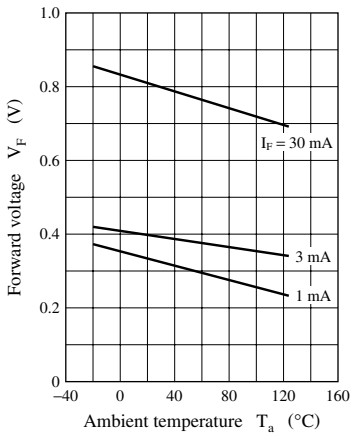
3. * : t_{rr} measuring instrument



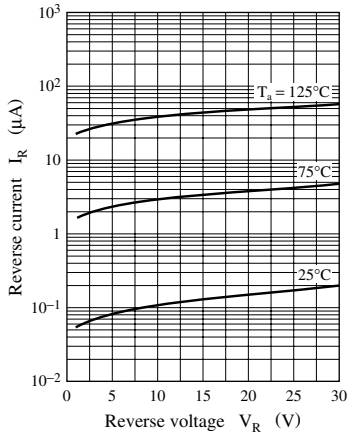
I_F — V_F



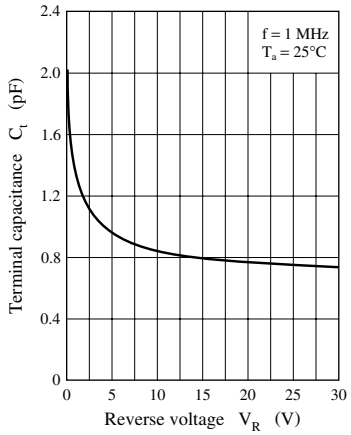
V_F — T_a



I_R — V_R



C_t — V_R



I_R — T_a