

MA4X713 (MA713)

Silicon epitaxial planar type

For switching circuits

For wave detection circuit

■ Features

- Two MA3X704As are contained in one package (of a type in the same 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})

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

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

Note) * : Value per chip

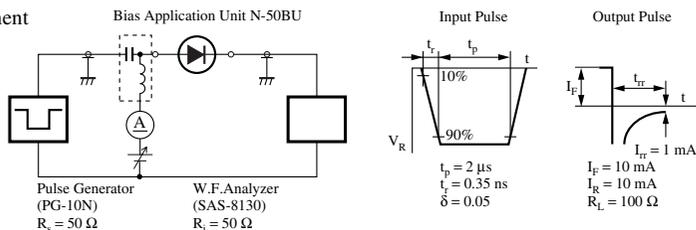
■ Electrical Characteristics $T_a = 25^\circ\text{C}$

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

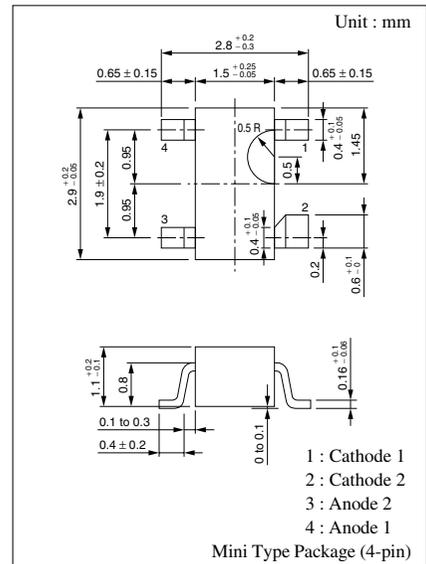
Note) 1. Schottky barrier diode is sensitive to electric shock (static electricity, etc.). Due attention must be paid on the charge of a human body and the leakage of current from the operating equipment

2. Rated input/output frequency: 200 MHz

3. *: t_{rr} measuring instrument

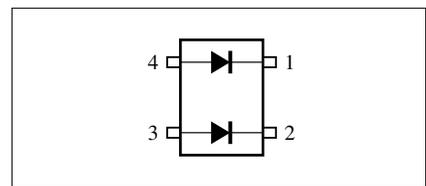


Note) The part number in the parenthesis shows conventional part number.

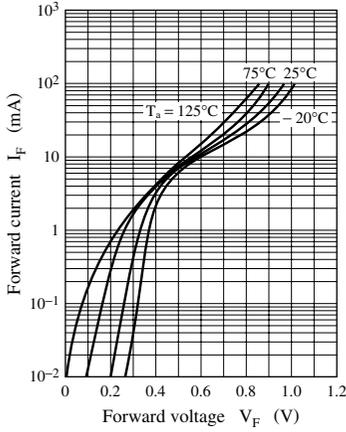


Marking Symbol: M1N

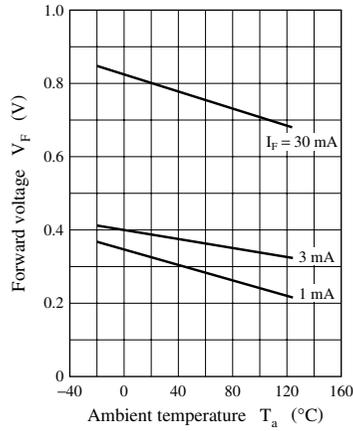
Internal Connection



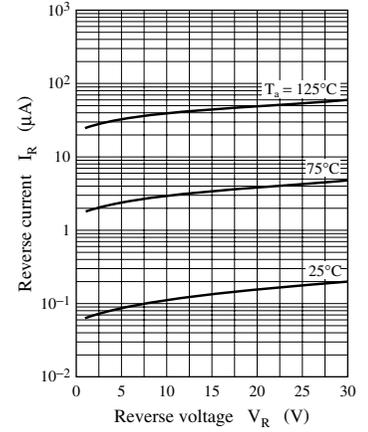
$I_F - V_F$ (Between pins 1 and 4, 2 and 3)



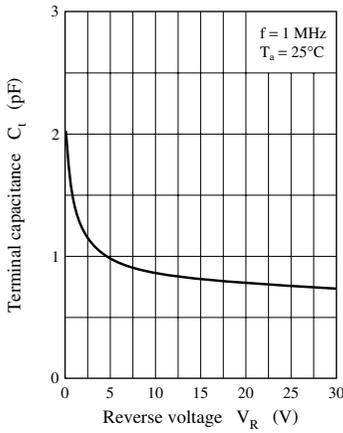
$V_F - T_a$ (Between pins 1 and 4, 2 and 3)



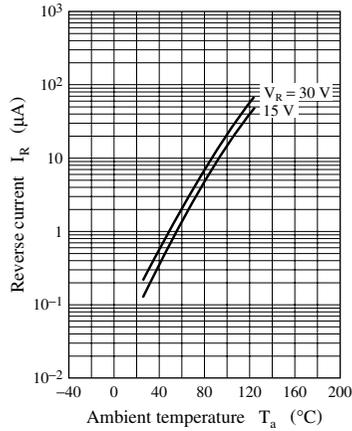
$I_R - V_R$ (Between pins 1 and 4, 2 and 3)



$C_t - V_R$ (Between pins 1 and 4, 2 and 3)



$I_R - T_a$ (Between pins 1 and 4, 2 and 3)



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