

MA743

Silicon epitaxial planer type

■ Features

- MA704A and MA721 chip with two elements incorporated
- Fast reverse recovery period t_{rr}
- Auto mounting possible

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

● Unit-1(MA704A)

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

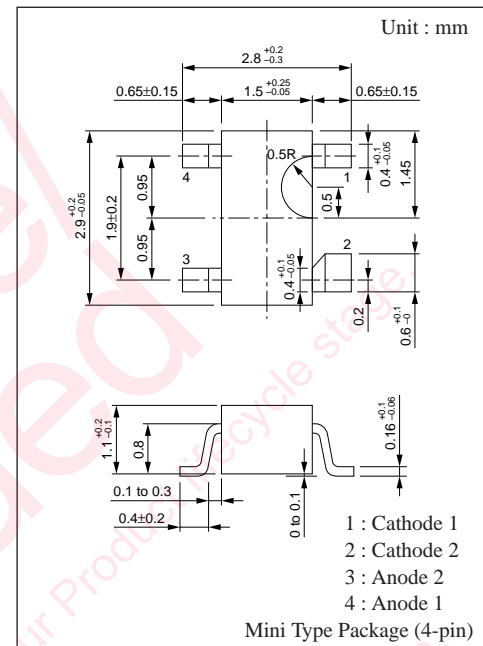
● Unit-2(MA721)

Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	V_R	30	V
Non-repetitive peak forward current	I_{FSM}	1	A
Peak forward current	I_{FM}	300	mA
Average forward current	$I_{F(AV)}$	200	mA
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	- 55 to +150	$^\circ\text{C}$

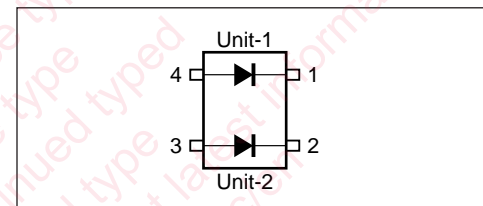
Note 1. 50Hz sine wave, one-cycle wave, high value (non-repetitive)

2. 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.

■ Marking



■ Internal Connection

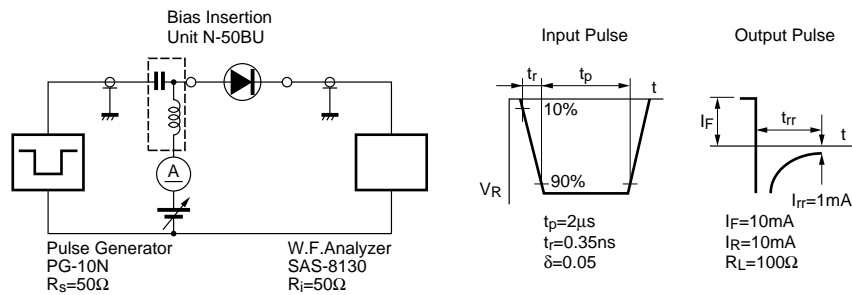


■ Electrical Characteristics (Ta= 25°C)

● Unit-1(MA704A)

Parameter	Symbol	Condition	min	typ	max	Unit
Reverse current (DC)	I_R	$V_R = 30V$			300	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}^*	$I_F = I_R = 10mA$ $I_{rr} = 1mA, R_L = 100\Omega$		1.0		ns
Detection efficiency	η	$V_{in} = 3V_{(peak)}, f = 30MHz$ $R_L = 3.9k\Omega, C_L = 10pF$		65		%

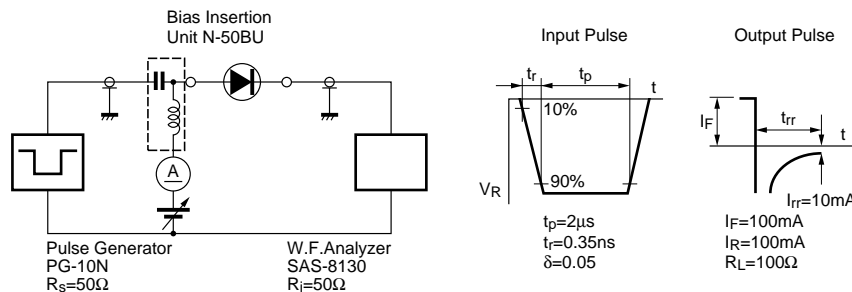
- Note 1. Schottky barrier diode is sensitive to electric shock (static electricity, etc.). Due attention must be paid on charge of a human body and leakage from the equipment used.
 2. Rated input/output frequency : 2000MHz
 3. * t_{rr} measuring circuit



● Unit-2(MA721)

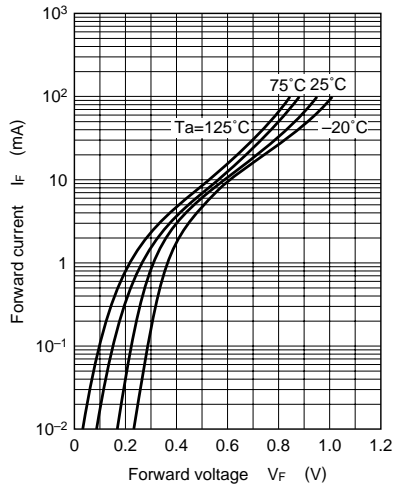
Parameter	Symbol	Condition	min	typ	max	Unit
Reverse current (DC)	I_R	$V_R = 30V$			50	μA
Forward voltage (DC)	V_F	$I_F = 200mA$			0.55	V
Terminal capacitance	C_t	$V_R = 0V, f = 1MHz$		30		pF
Reverse recovery time	t_{rr}^*	$I_F = I_R = 100mA$ $I_{rr} = 10mA, R_L = 100\Omega$		3.0		ns

- 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 : 1000MHz
 3. * t_{rr} measuring circuit

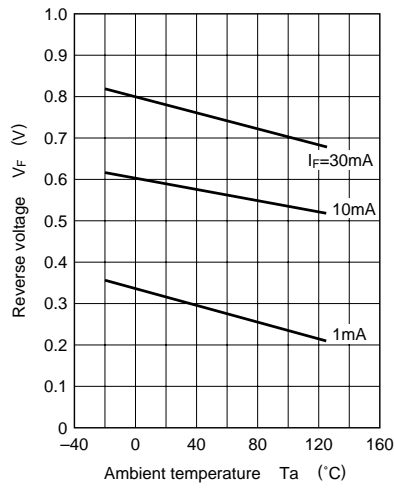


Characteristics chart of Unit-1 (MA704A)

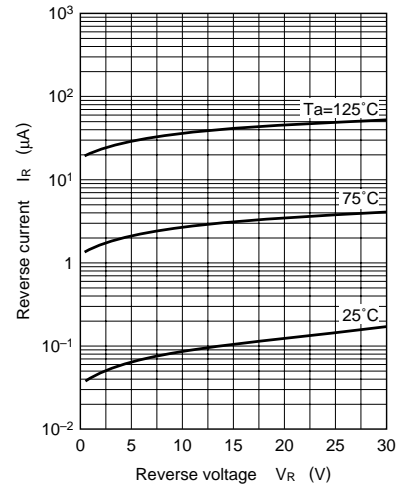
$I_F - V_F$



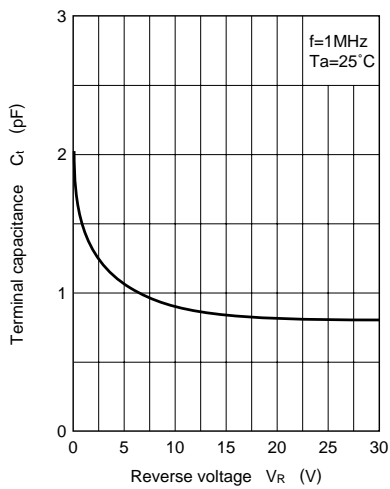
$V_F - T_a$



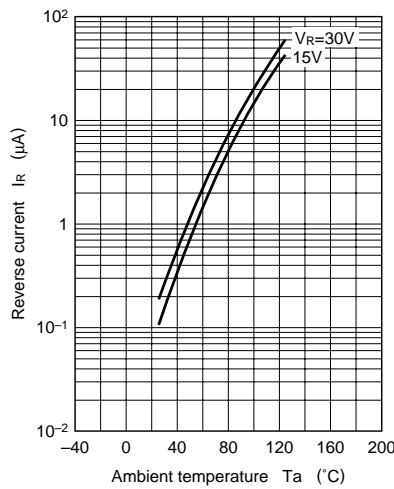
$I_R - V_R$



$C_t - V_R$

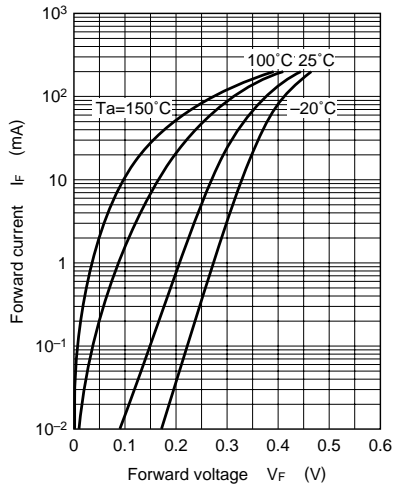


$I_R - T_a$

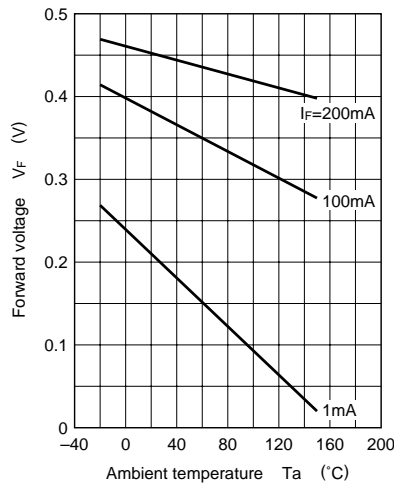


Characteristics chart of Unit-2 (MA721)

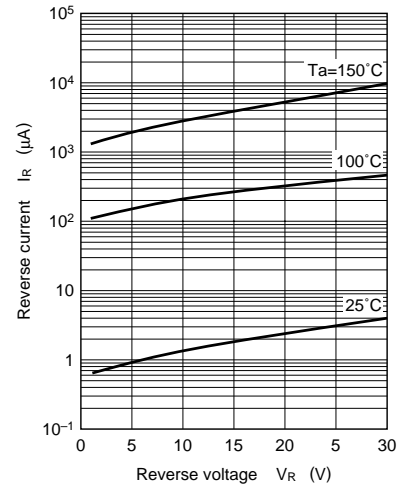
$I_F - V_F$



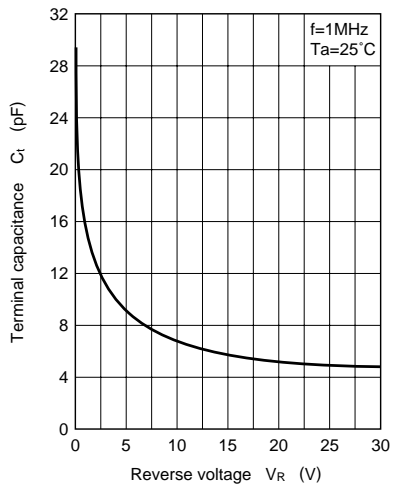
$V_F - T_a$



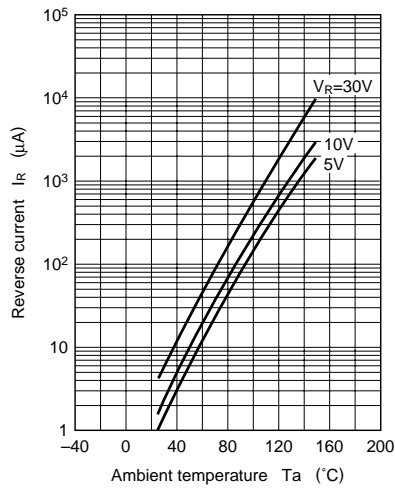
$I_R - V_R$



$C_t - V_R$



$I_R - T_a$



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