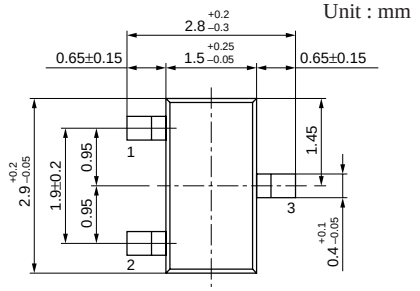
MA704, MA704A

Silicon epitaxial planer type

For switching
For wave detection circuit

■ Features

- Low forward rise voltage V_F and satisfactory wave detection efficiency
- Temperature coefficient of forward characteristic is small.
- Extremely low reverse current I_R



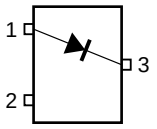
1 : Anode
2 : NC
3 : Cathode

JEDEC : TO-236
EIAJ : SC-59
Mini Type Package (3-pin)

■ Absolute Maximum Ratings (Ta= 25˚C)

Parameter		Symbol	Rating	Unit
Reverse voltage (DC)	MA704	V_R	15	V
	MA704A		30	
Peak reverse voltage	MA704	V_{RM}	15	V
	MA704A		30	
Peak forward current		I_{FM}	150	mA
Forward current (DC)		I_F	30	mA
Junction temperature		T_j	125	A
Storage temperature		T_{stg}	– 55 to + 125	˚C

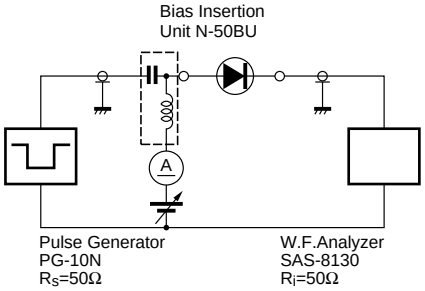
■ Internal Connection

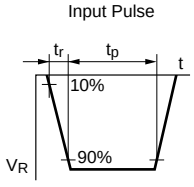


■ Electrical Characteristics (Ta= 25˚C)

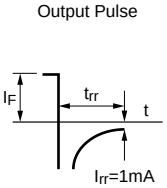
Parameter		Symbol	Condition	min	typ	max	Unit
Reverse current (DC)	MA704	I_R	V_R =15V			200	nA
	MA704A		V_R = 30V			300	
Forward voltage (DC)		V_{F1}	I_F =1mA			0.4	V
		V_{F2}	I_F = 30mA			1	V
Terminal capacitance		C_t	V_R =1V, f=1MHz		1.5		pF
Reverse recovery time		t_{rr}*	I_F = I_R=10mA I_{rr}=1mA, R_L=100Ω		1		ns
Detection efficiency		η	V_{in}= 3$V_{(peak)}$, f= 30MHz R_L= 3.9kΩ, 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





tp=2μs
tr=0.35ns
δ=0.05



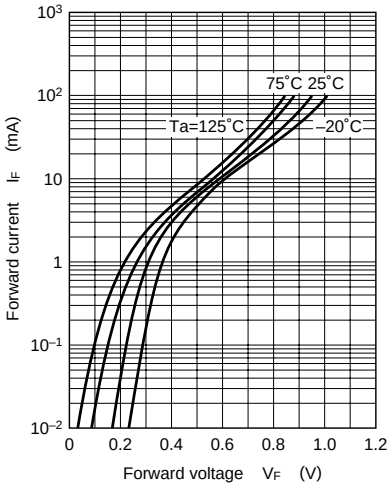
IF=10mA
IR=10mA
RL=100Ω

■ Marking

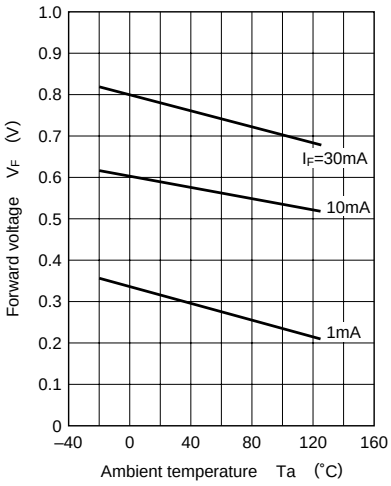
Part Number	MA704	MA704A
Symbol	M1K	M1L

Common characteristics chart

$I_F - V_F$

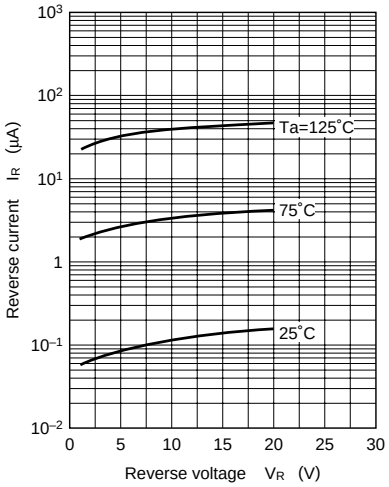


$V_F - Ta$

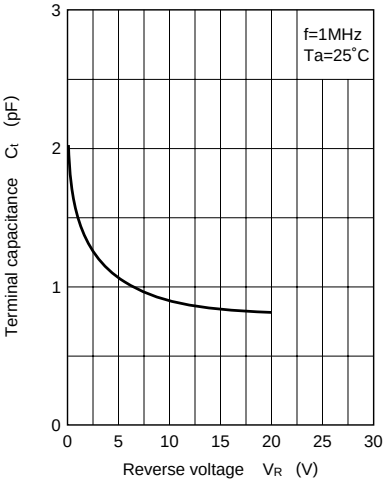


Characteristics chart of MA704

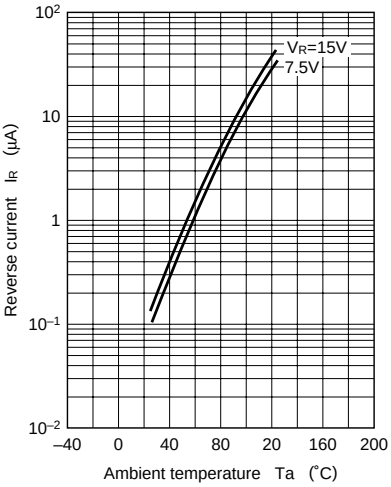
$I_R - V_R$



$C_t - V_R$

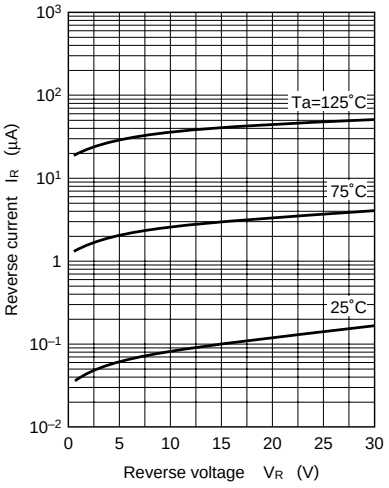


$I_R - Ta$

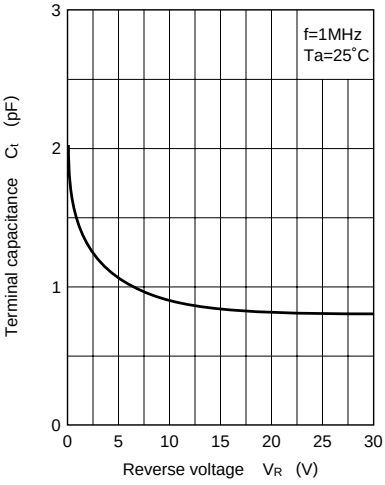


Characteristics chart of MA704A

$I_R - V_R$



$C_t - V_R$



$I_R - Ta$