MA999

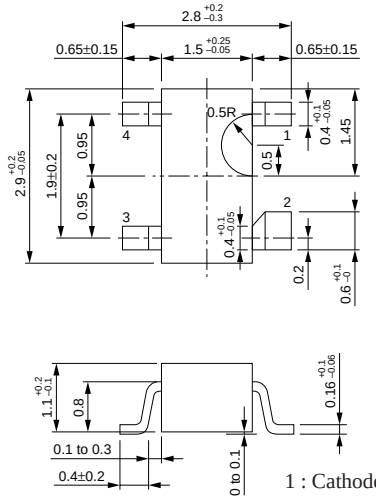
Silicon epitaxial planer type

For switching circuits

■ Features

- MA704A and MA151K chip with two elements incorporated
- Short reverse recovery period t_{rr}
- Automatic mounting possible

Unit : mm



1 : Cathode 1
2 : Cathode 2
3 : Anode 2
4 : Anode 1

Mini Type Package (4-pin)

■ Absolute Maximum Ratings (Ta= 25˚C)

● Unit-1(MA704A)

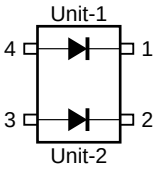
Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	V_R	30	V
Peak reverse voltage	V_{RM}	30	V
Forward current (DC)	I_F	30	mA
Peak forward current	I_{FM}	150	mA
Junction temperature	T_j	125	˚C
Storage temperature	T_{stg}	– 55 to + 125	˚C

● Unit-2(MA151K)

Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	V_R	40	V
Peak reverse voltage	V_{RM}	40	V
Forward current (DC)	I_F	100	mA
Peak forward current	I_{FM}	225	mA
Non-repetitive peak forward surge current	I_{FSM} *	500	mA
Junction temperature	T_j	125	˚C
Storage temperature	T_{stg}	– 55 to +125	˚C

* t=1s

■ Internal Connection



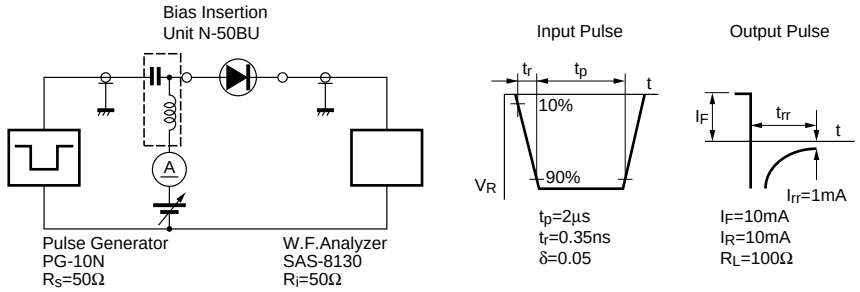
■ Marking

■ Electrical Characteristics (Ta= 25˚C)

● Unit-1

Parameter	Symbol	Condition	min	typ	max	Unit
Reverse current (DC)	I_R	V_R= 30V			300	nA
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=100Ω		1.0		ns
Detection efficiency	η	V_{in}= $3V_{(peak)}$, f= 30MHz R_L= 3.9kΩ, C_L=10pF		65		%

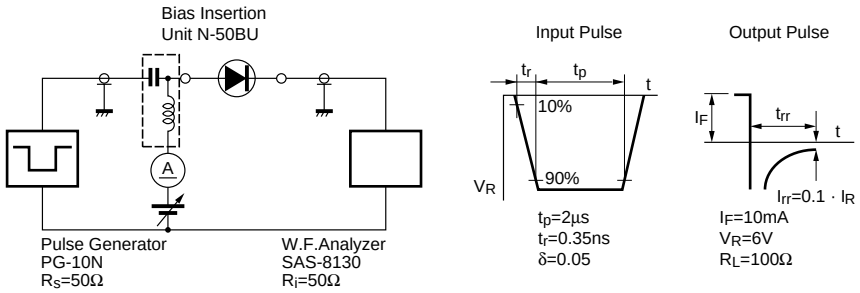
Note 1 : Rated input/output frequency : 2000MHz
2 : This Schotky barrier diode is sensitive to electric shock (static electricity, etc.). Due attention to the electric charge of a human body or the leakage from the equipment in use.
3 : * t_{rr} measuring circuit



● Unit-2

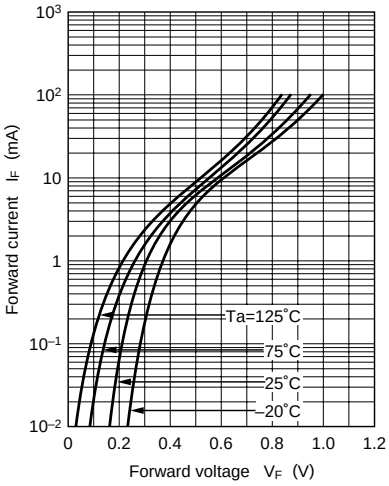
Parameter	Symbol	Condition	min	typ	max	Unit
Reverse current (DC)	I_R	V_R= 35V			100	nA
Forward voltage (DC)	V_F	I_F=100mA		0.95	1.2	V
Reverse voltage (DC)	V_R	I_R=100μA	40			V
Terminal capacitance	C_t	V_R= 0V, f=1MHz		0.9	2	pF
Reverse recovery time	t_{rr} *	I_F=10mA, V_R= 6V I_{rr}= 0.1 · I_R, R_L=100Ω			3	ns

Note 1 : Rated input/output frequency : 100MHz
2 : * t_{rr} measuring circuit

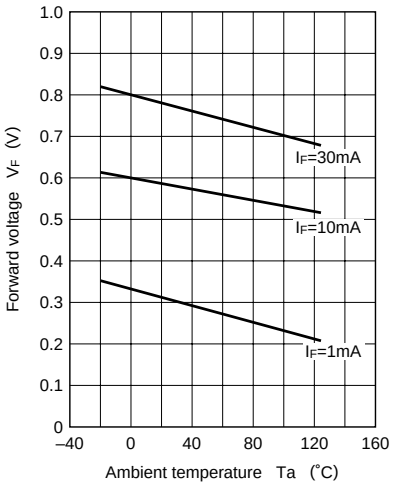


Characteristics chart of Unit-1(MA704A) (Between pins 1 and 4)

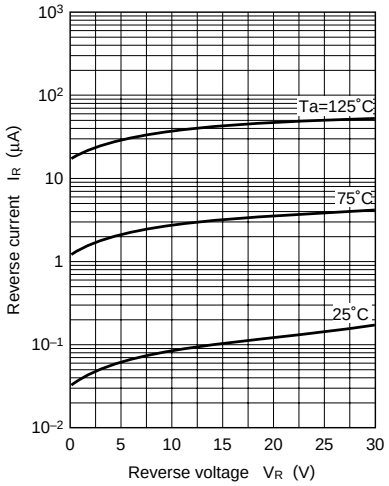
$I_F - V_F$



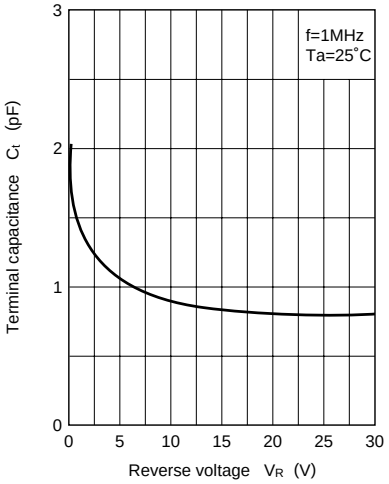
$V_F - Ta$



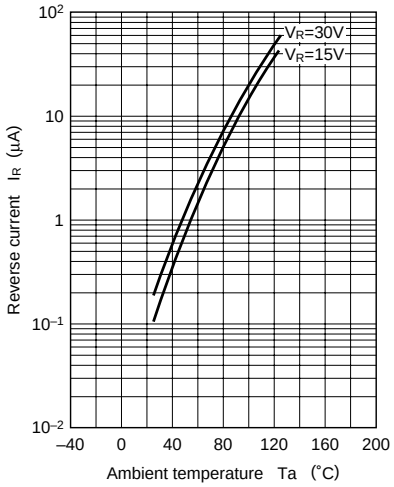
$I_R - V_R$



$C_t - V_R$

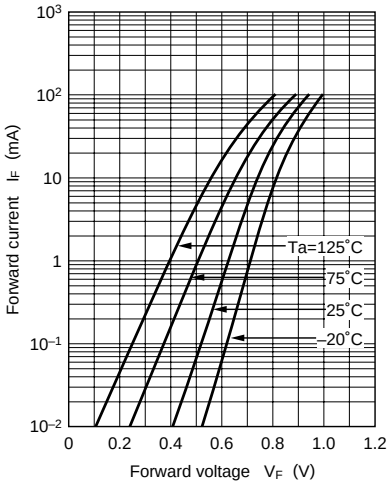


$I_R - Ta$

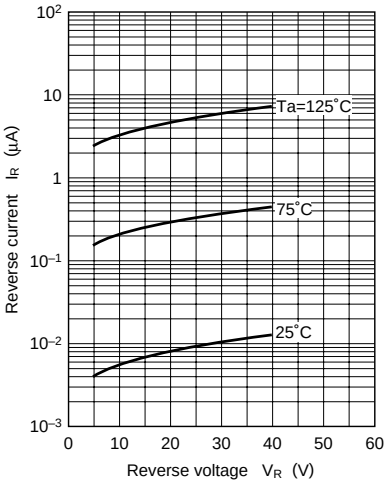


Characteristics chart of Unit-2(MA151K) (Between pins 2 and 3)

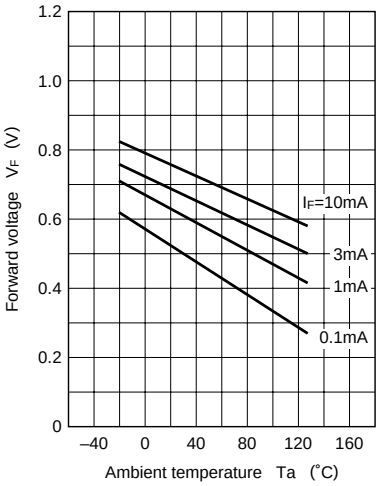
$I_F - V_F$



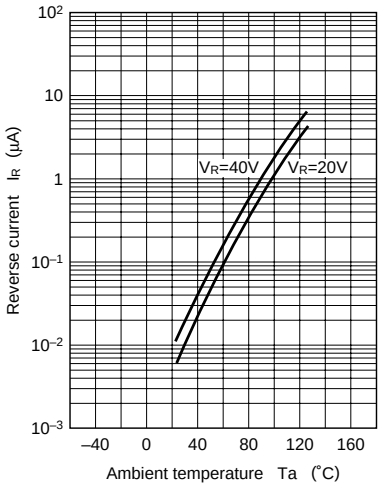
$I_R - V_R$



$V_F - Ta$



$I_R - Ta$



$C_t - V_R$