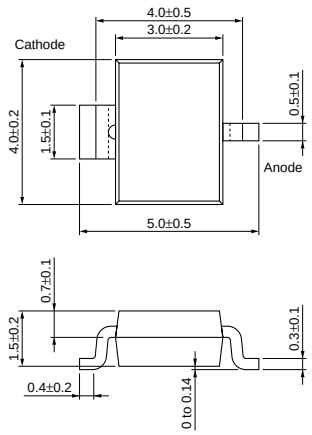
MA701, MA701A

Silicon epitaxial planer type

For high-frequency rectification

Unit : mm



1 : Cathode
2 : Anode
Mini-Power Type Package (2-pin)

■ Features

- Low forward rise voltage V_F, optimum for low-voltage rectification
- Fast reverse recovery time t_{rr}, optimum for high-frequency rectification
- Low thermal resistance $R_{th(j\text{-}a)}$. Small size, enabling large-current rectification

■ Absolute Maximum Ratings (Ta= 25˚C)

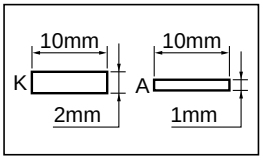
Parameter		Symbol	Rating	Unit
Reverse voltage (DC)	MA701	V_R	20	V
	MA701A		40	
Repetitive peak reverse voltage	MA701	V_{RRM}	20	V
	MA701A		40	
Peak forward current		I_{FM}	2	A
Average forward current		$I_{F(AV)}$*1	1	A
Non-repetitive peak forward surge current		I_{FSM}*2	6	A
Junction temperature		T_j	125	˚C
Storage temperature		T_{stg}	– 55 to + 125	˚C

*1 With a printed-circuit board (copper foil area cathode side) 2mm × 10mm or more (copper foil area anode side) 1mm × 10mm or more. Board thickness t=1.6mm
*2 50Hz sine wave, one-cycle wave, high value (non-repetitive)

■ Electrical Characteristics (Ta= 25˚C)

Parameter		Symbol	Condition	min	typ	max	Unit
Reverse current (DC)	MA701	I_R	V_R =20V			1	mA
	MA701A		V_R = 40V			2	
Forward voltage (DC)		V_F	I_F = 1.0A			0.55	V
Terminal capacitance		C_t	V_R = 0V, f=1MHz		210		pF
Reverse recovery time		t_{rr}*2	I_F = I_R=100mA I_{rr}=10mA, R_L=100Ω		14		ns
Thermal resistance		$R_{th(j\text{-}a)}$*1			0.15		˚C/mW

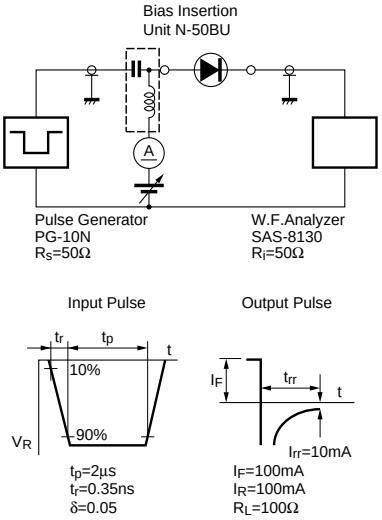
Note 1. Schottky barrier diode is sensitive to electric shock (static electricity, etc.). Due attention must be paid on charge of a human body and leakage from the equipment used.
2. Rated input/output frequency : 150MHz
3. *1 With a printed-circuit board (copper foil area cathode side) 2mm × 10mm or more (copper foil area anode side) 1mm × 10mm or more. Board thickness t=1.6mm



■ Marking

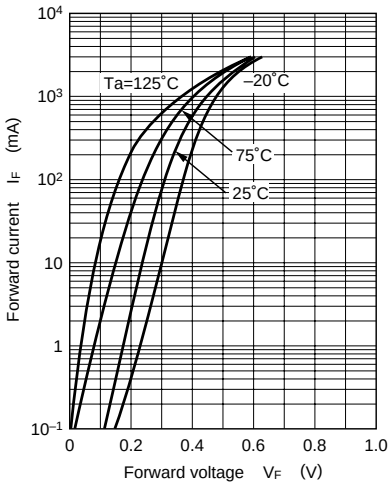
Part Number	MA701	MA701A
Symbol	701	701A

*2 t_{rr} measuring circuit

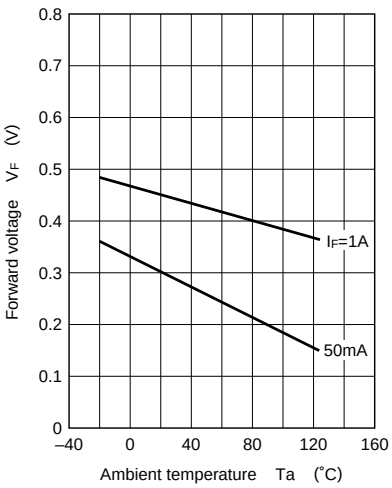


Common characteristics chart

$I_F - V_F$

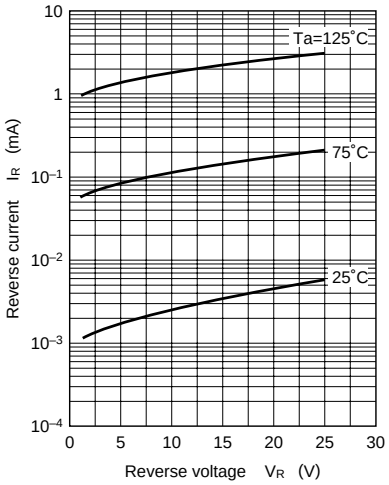


$V_F - Ta$

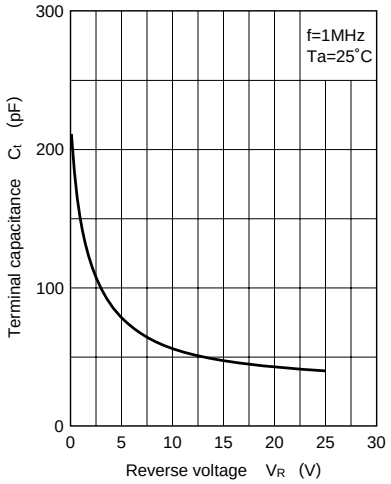


Characteristics chart of MA701

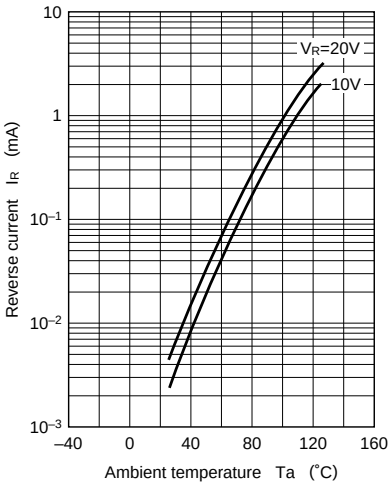
$I_R - V_R$



$C_t - V_R$

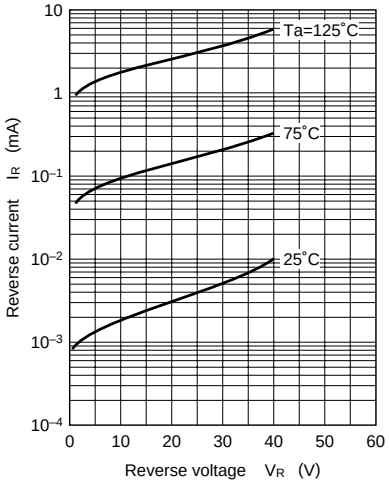


$I_R - Ta$

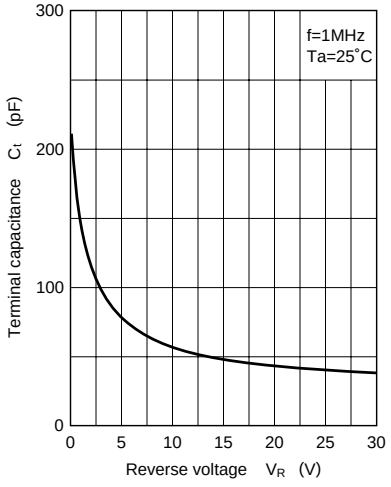


Characteristics chart of MA701A

$I_R - V_R$



$C_t - V_R$



$I_R - Ta$