

MA701, MA701A

Silicon epitaxial planer type

For high-frequency rectification

■ 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 $R_{th(j-a)}$. Small size, enabling large-current rectification

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

Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	MA701	20	V
	MA701A	40	
Repetitive peak reverse voltage	MA701	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	$^\circ\text{C}$
Storage temperature	T_{stg}	- 55 to + 125	$^\circ\text{C}$

*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 $t=1.6\text{mm}$

*2 50Hz sine wave, one-cycle wave, high value (non-repetitive)

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

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

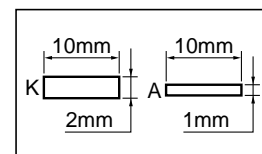
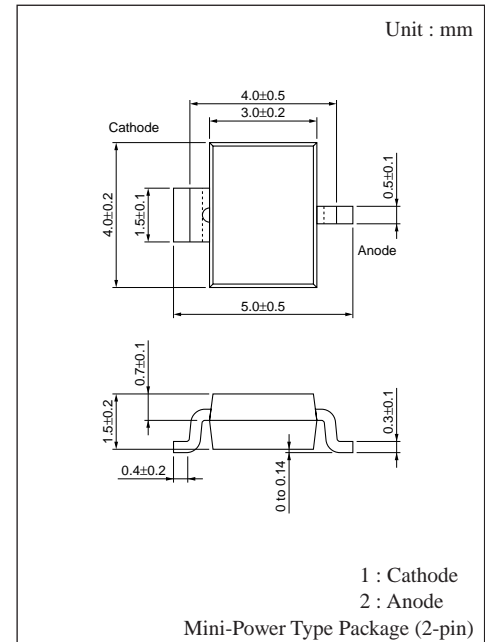
Note 1. Schottky barrier diode is sensitive to electric shock (static electricity, etc.). Due attention must be paid on charge of a human body and leakage from the equipment used.

2. Rated input/output frequency : 150MHz

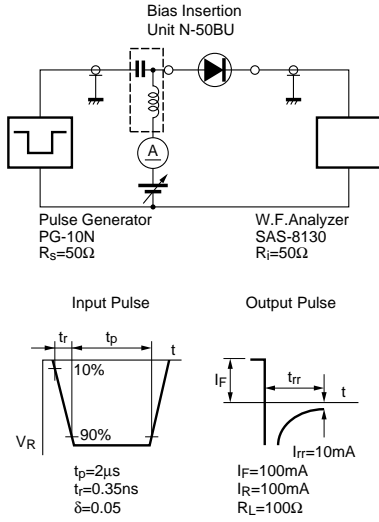
3. *1 With a printed-circuit board (copper foil area cathode side) 2mm × 10mm or more (copper foil area anode side) 1mm × 10mm or more. Board thickness $t=1.6\text{mm}$

■ Marking

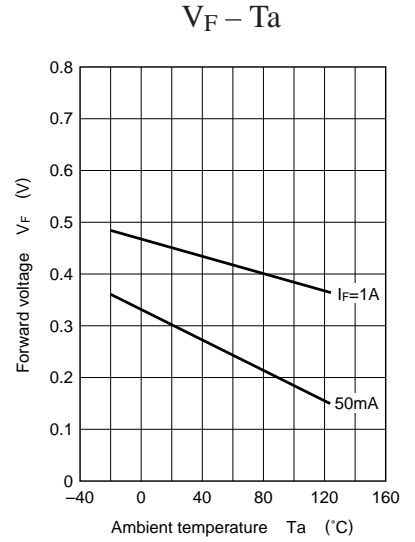
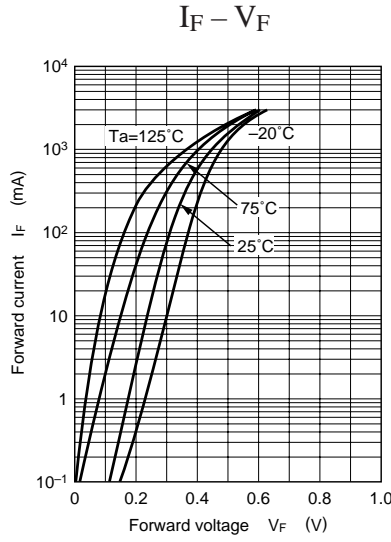
Part Number	MA701	MA701A
Symbol		



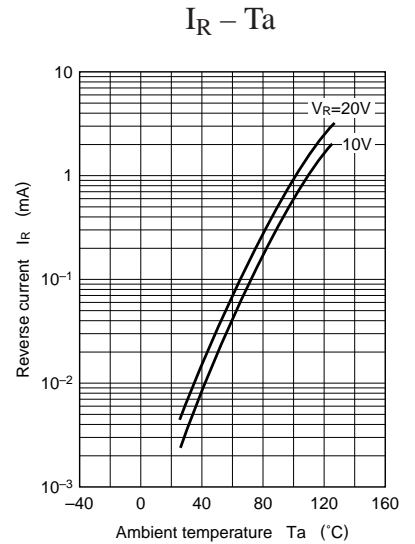
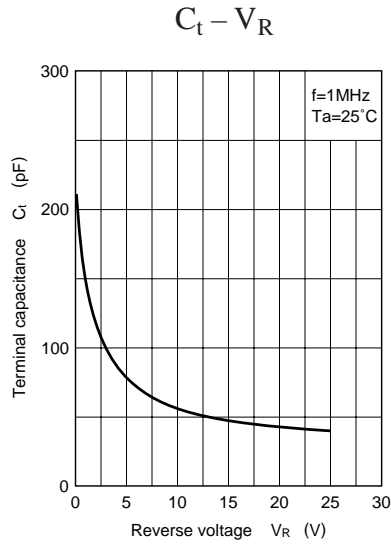
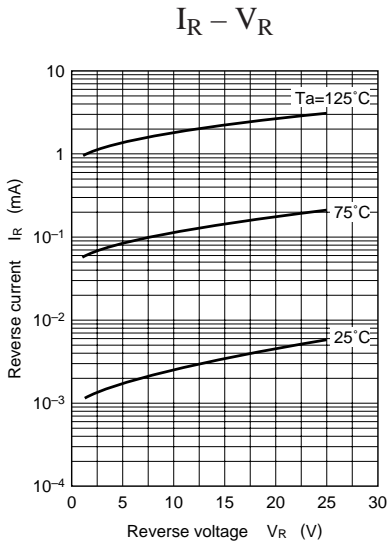
*2 t_{rr} measuring circuit



Common characteristics chart



Characteristics chart of MA701



Characteristics chart of MA701A

