

# MA2B170, MA2B171 (MA170, MA171)

Silicon epitaxial planar type

For high-speed switching circuits

## ■ Features

- Large forward current  $I_{F(AV)}$
- High switching speed
- Small terminal capacitance,  $C_t$

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

Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	$V_R$	40	V
		80	
Repetitive peak reverse voltage	$V_{RRM}$	40	V
		80	
Average forward current	$I_{F(AV)}$	200	mA
Repetitive peak forward current	$I_{FRM}$	600	mA
Non-repetitive peak forward surge current*	$I_{FSM}$	1	A
Junction temperature	$T_j$	200	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +200	$^\circ\text{C}$

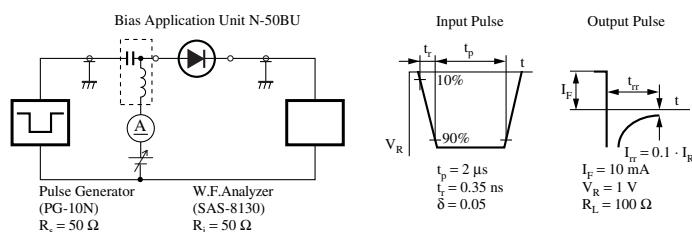
Note) \* :  $t = 1\text{ s}$

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current (DC)	$I_{R1}$	$V_R = 15\text{ V}$			50	nA
MA2B170	$I_{R2}$	$V_R = 35\text{ V}$			500	nA
		$V_R = 75\text{ V}$			500	
MA2B170	$I_R$	$V_R = 35\text{ V}, T_a = 150^\circ\text{C}$			100	$\mu\text{A}$
		$V_R = 75\text{ V}, T_a = 150^\circ\text{C}$			100	
Forward voltage (DC)	$V_F$	$I_F = 200\text{ mA}$			1.1	V
Terminal capacitance	$C_t$	$V_R = 0\text{ V}, f = 1\text{ MHz}$			4	pF
Reverse recovery time*	$t_{rr}$	$I_F = 10\text{ mA}, V_R = 1\text{ V}$ $I_{rr} = 0.1 \cdot I_R, R_L = 100\Omega$			20	ns

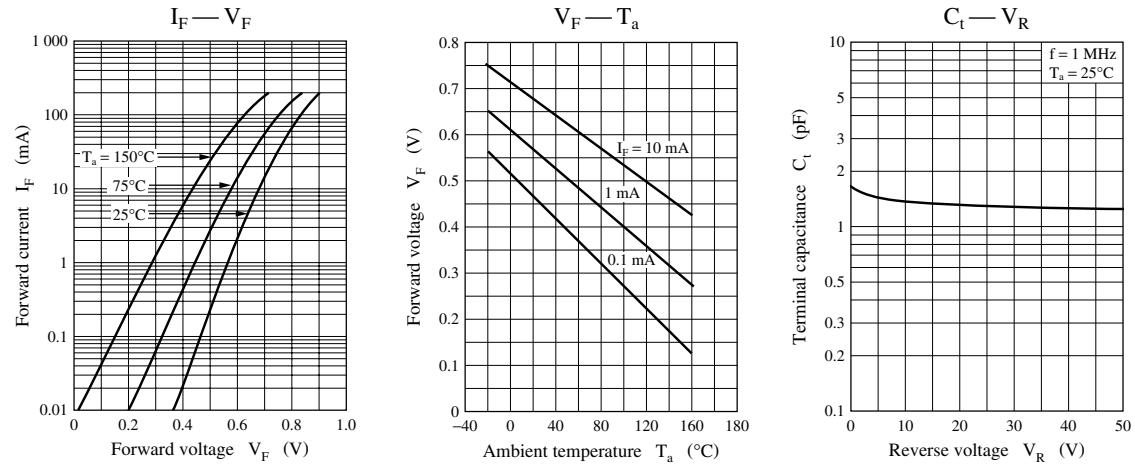
Note) 1. Rated input/output frequency: 100 MHz

2. \* :  $t_{rr}$  measuring circuit

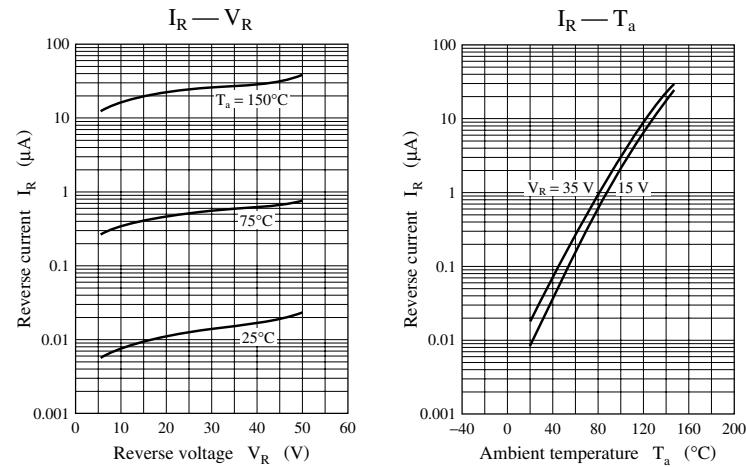


Note) The part numbers in the parenthesis show conventional part number.

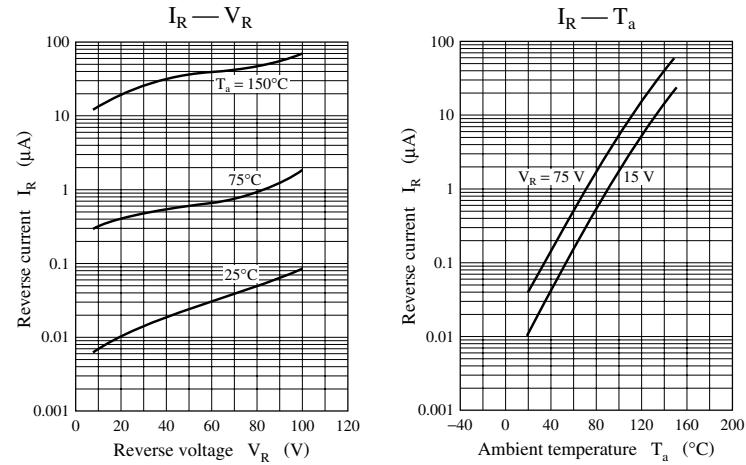
## Common characteristics charts



## Characteristics charts of MA2B170



## Characteristics charts of MA2B171



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