

# MA2C165, MA2C166, MA2C167

## (MA165, MA166, MA167)

Silicon epitaxial planar type

For switching circuits

### ■ Features

- Short reverse recovery time  $t_{rr}$
- Small terminal capacitance,  $C_t$

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

Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	V <sub>R</sub>	35	V
		50	
		75	
Repetitive peak reverse voltage	V <sub>RRM</sub>	35	V
		50	
		75	
Average forward current	I <sub>F(AV)</sub>	100	mA
Repetitive peak forward current	I <sub>FRM</sub>	225	mA
Non-repetitive peak forward surge current*	I <sub>FSM</sub>	500	mA
Junction temperature	T <sub>j</sub>	200	°C
Storage temperature	T <sub>stg</sub>	-55 to +200	°C

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

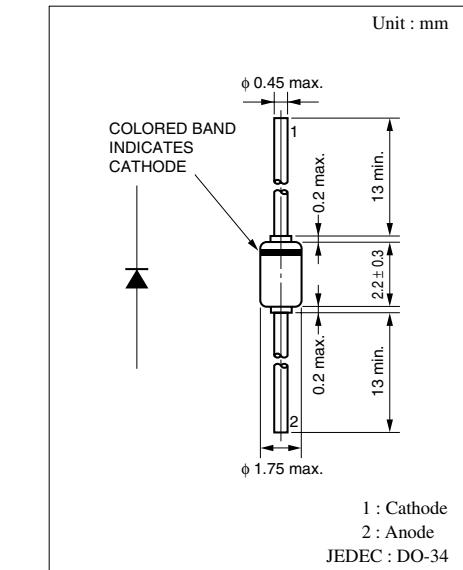
### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current (DC)	I <sub>R</sub>	$V_R = 15\text{ V}$			0.025	μA
		$V_R = 30\text{ V}$			0.1	
		$V_R = 15\text{ V}$			0.025	
		$V_R = 50\text{ V}$			5	
		$V_R = 20\text{ V}$		0.012	0.025	
		$V_R = 75\text{ V}$			5	
		$V_R = 35\text{ V}, T_a = 150^\circ\text{C}$			100	
		$V_R = 50\text{ V}, T_a = 150^\circ\text{C}$			100	
		$V_R = 75\text{ V}, T_a = 150^\circ\text{C}$		50	100	
Forward voltage (DC)	V <sub>F</sub>	$I_F = 100\text{ mA}$		0.95	1.2	V
Reverse voltage (DC)	V <sub>R</sub>	$I_R = 5\text{ μA}$	35			V
Terminal capacitance	C <sub>t</sub>	$V_R = 0\text{ V}, f = 1\text{ MHz}$		0.9	2	pF
Reverse recovery time*	t <sub>rr</sub>	$I_F = 10\text{ mA}, V_R = 1\text{ V},$			10	ns
		$I_{rr} = 0.1 \cdot I_R, R_L = 100\text{ Ω}$		2.2	4	

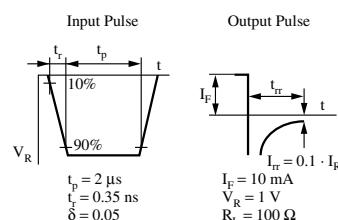
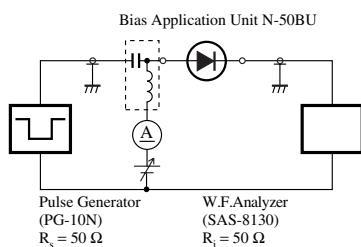
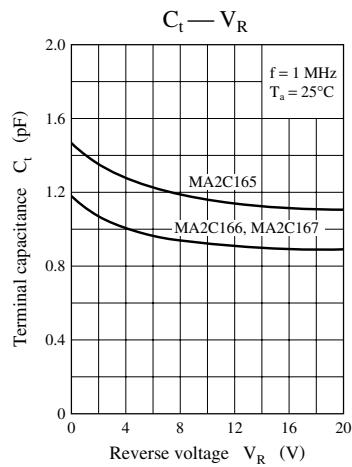
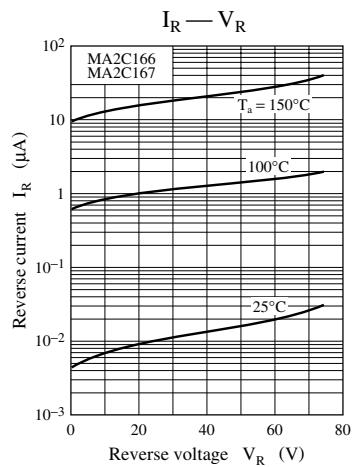
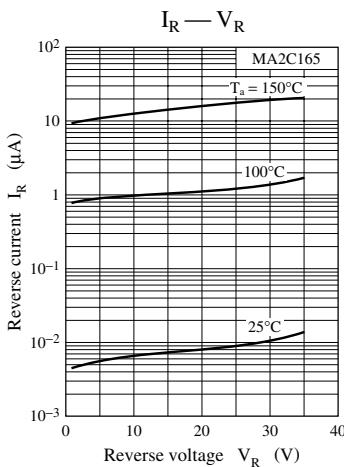
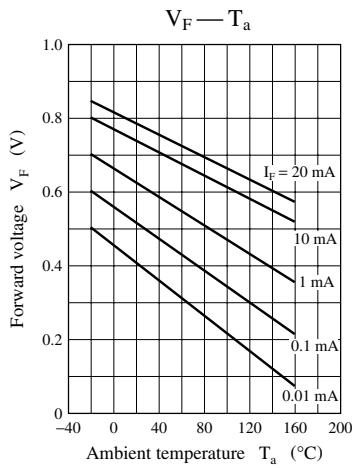
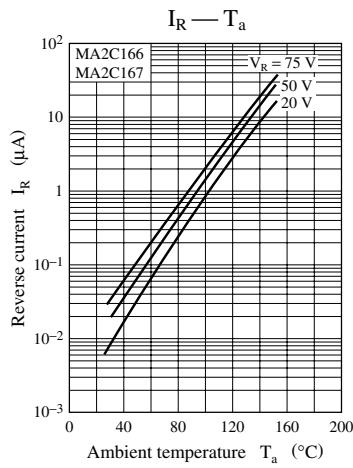
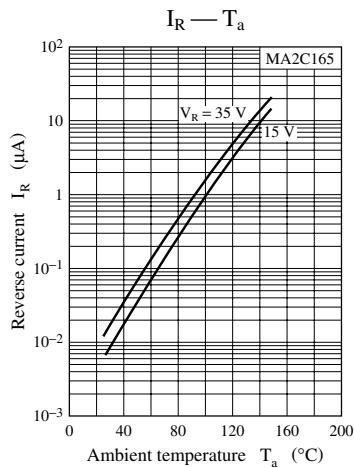
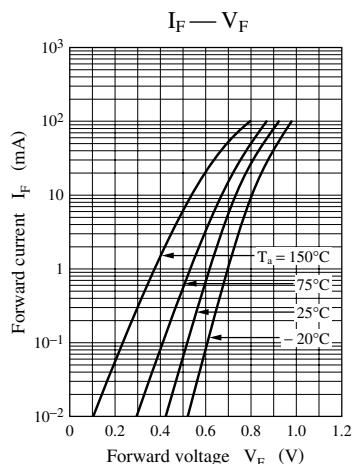
Note) 1. Rated input/output frequency: 100 MHz (MA2C165), 250 MHz (MA2C167), 1 000 MHz (MA2C166) 2. \* : t<sub>rr</sub> measuring circuit

### ■ Cathode Indication

Type No.	MA2C165	MA2C166	MA2C167
Color	White	Green	Violet



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

 $t_{tr}$  measuring circuit

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