

# MA2C165, MA2C166, MA2C167 (MA165, MA166, MA167)

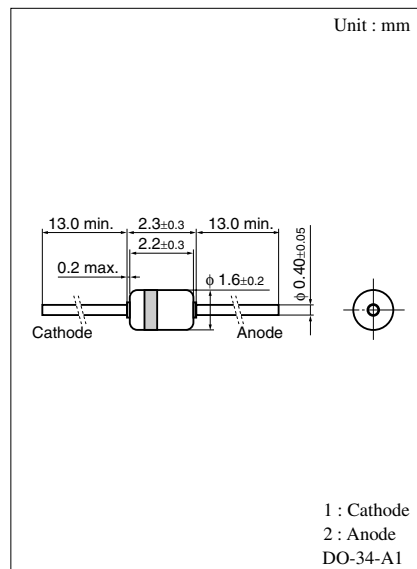
Silicon epitaxial planar type  
For switching circuits

## ■ 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)	MA2C165	$V_R$	35	V
	MA2C166		50	
	MA2C167		75	
Repetitive peak reverse voltage	MA2C165	$V_{RRM}$	35	V
	MA2C166		50	
	MA2C167		75	
Average forward current	$I_{F(AV)}$	100	mA	
Repetitive peak forward current	$I_{FRM}$	225	mA	
Non-repetitive peak forward surge current*	$I_{FSM}$	500	mA	
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 $T_a = 25^\circ\text{C}$

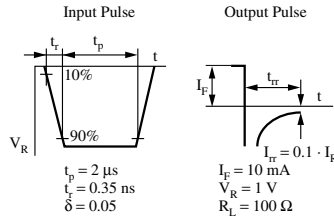
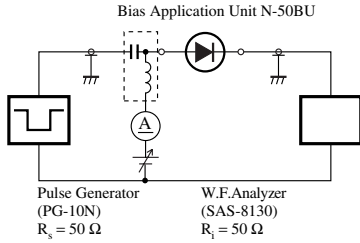
Parameter	Symbol	Conditions	Min	Typ	Max	Unit	
Reverse current (DC)	MA2C165	$V_R = 15 \text{ V}$			0.025	$\mu\text{A}$	
		$V_R = 30 \text{ V}$			0.1		
	MA2C166	$V_R = 15 \text{ V}$			0.025		
		$V_R = 50 \text{ V}$			5		
	MA2C167	$V_R = 20 \text{ V}$		0.012	0.025		
		$V_R = 75 \text{ V}$			5		
	MA2C165		$V_R = 35 \text{ V}, T_a = 150^\circ\text{C}$				100
	MA2C166		$V_R = 50 \text{ V}, T_a = 150^\circ\text{C}$				100
MA2C167		$V_R = 75 \text{ V}, T_a = 150^\circ\text{C}$		50	100		
Forward voltage (DC)	$V_F$	$I_F = 100 \text{ mA}$		0.95	1.2	V	
Reverse voltage (DC)	$V_R$	$I_R = 5 \mu\text{A}$	35			V	
Terminal capacitance	$C_t$	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$		0.9	2	pF	
Reverse recovery time*	MA2C165	$I_F = 10 \text{ mA}, V_R = 1 \text{ V},$ $I_{rr} = 0.1 \cdot I_R, R_L = 100 \Omega$			10	ns	
	MA2C166/167			2.2	4		

Note) 1. Rated input/output frequency: 100 MHz (MA2C165), 250 MHz (MA2C167), 1 000 MHz (MA2C166) 2. \* :  $t_{rr}$  measuring circuit

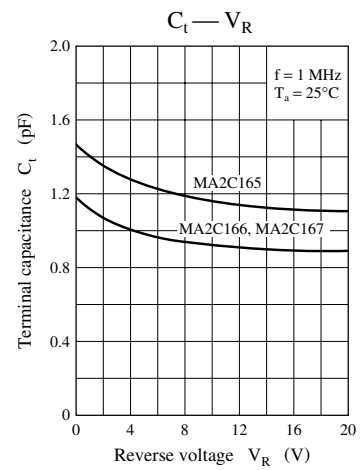
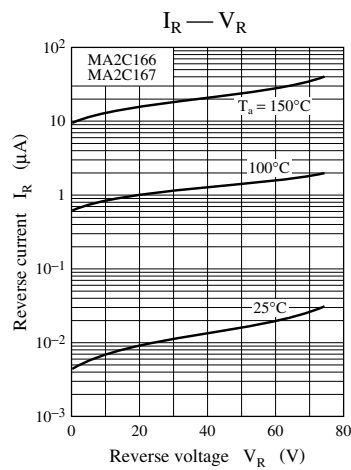
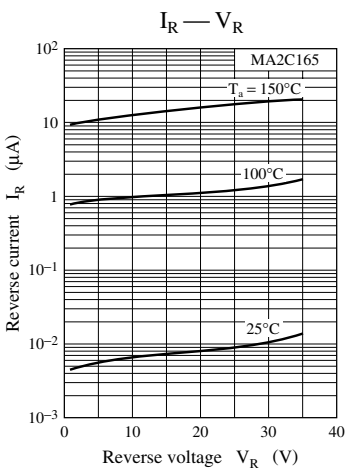
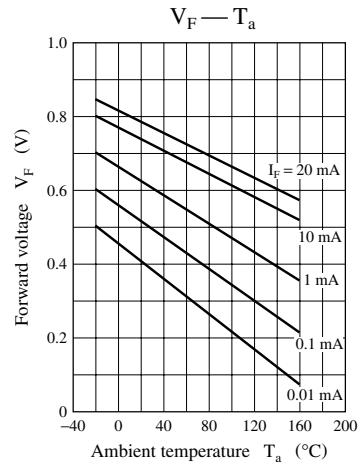
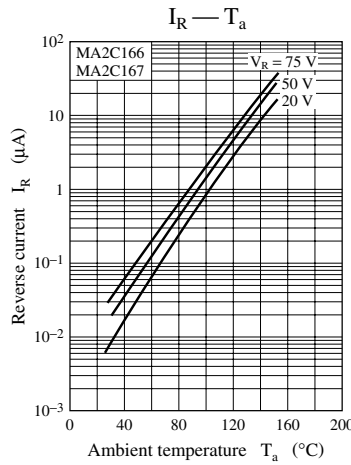
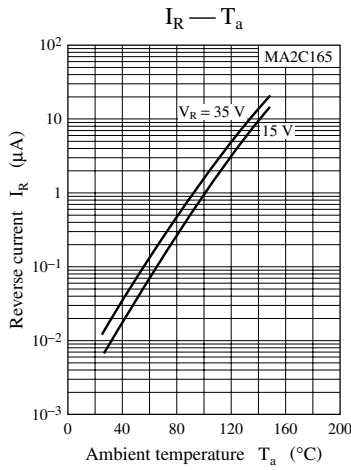
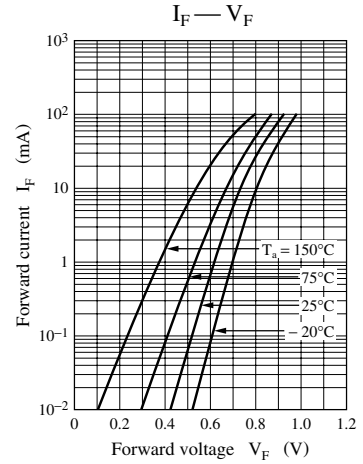
## ■ Cathode Indication

Type No.	MA2C165	MA2C166	MA2C167
Color	White	Green	Violet

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



$t_{rr}$  measuring circuit



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