

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

## Silicon epitaxial planar type

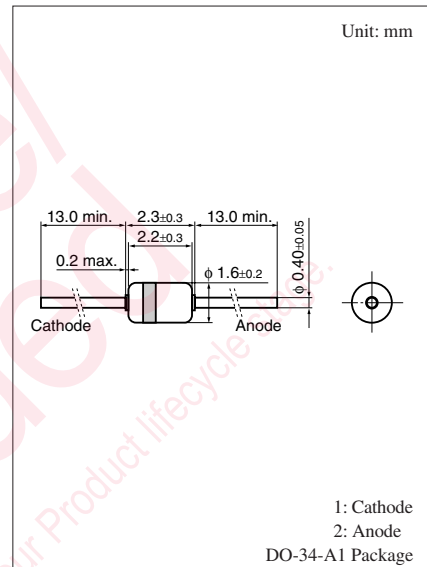
For switching circuits

## ■ 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	MA2C165	$V_R$	35	V
	MA2C166			
	MA2C167			
Repetitive peak reverse voltage	MA2C165	$V_{RRM}$	35	V
	MA2C166			
	MA2C167			
Forward current (Average)	$I_{F(AV)}$	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	$T_{sig}$	-55 to +200	$^\circ\text{C}$	

Note) \*:  $t = 1$  s■ Electrical Characteristics  $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$ 

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	$V_F$	$I_F = 100$ mA		0.95	1.20	V
Reverse voltage	MA2C165 $V_R$	$I_R = 5$ $\mu\text{A}$	35			V
Reverse current	MA2C165 $I_{R1}$	$V_R = 15$ V			25	nA
	MA2C166	$V_R = 15$ V			25	
	MA2C167	$V_R = 20$ V			25	
	MA2C165 $I_{R2}$	$V_R = 30$ V			100	nA
	MA2C166	$V_R = 50$ V			5	$\mu\text{A}$
	MA2C167	$V_R = 75$ V			5	
	MA2C165 $I_{R3}$	$V_R = 35$ V, $T_a = 150^\circ\text{C}$			100	$\mu\text{A}$
	MA2C166	$V_R = 50$ V, $T_a = 150^\circ\text{C}$			100	
	MA2C167	$V_R = 75$ V, $T_a = 150^\circ\text{C}$			100	
Terminal capacitance	$C_t$	$V_R = 0$ V, $f = 1$ MHz		0.9	2.0	pF
Reverse recovery time *	MA2C165 $t_{rr}$	$I_F = 10$ mA, $V_R = 1$ V			10	ns
	MA2C166/167	$I_{rr} = 0.1$ $I_R$ , $R_L = 100$ $\Omega$		2.2	4.0	

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

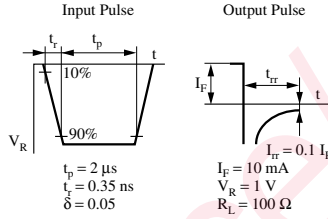
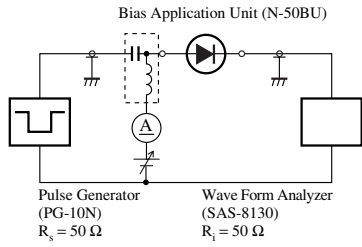
2. Absolute frequency of input and output is 100 MHz (MA2C165), 1000 MHz (MA2C166), 250MHz (MA2C167).

3. \*:  $t_{rr}$  measurement circuit

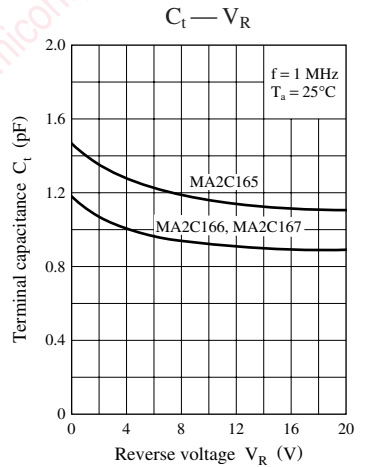
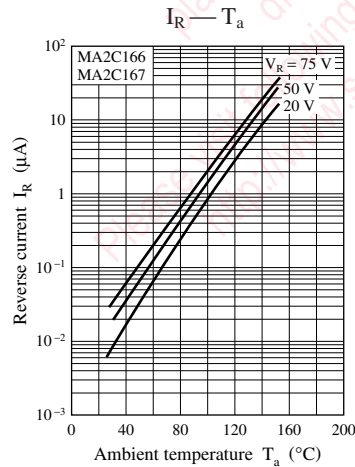
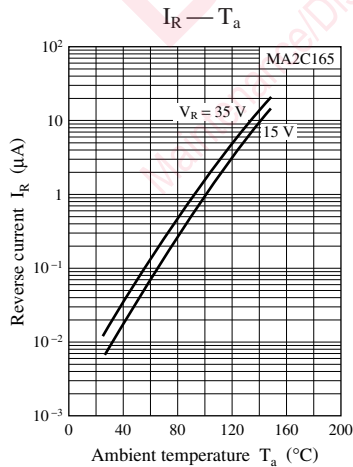
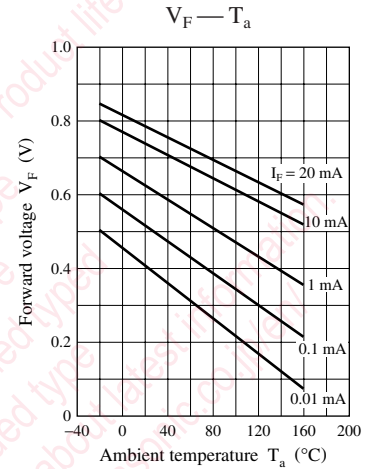
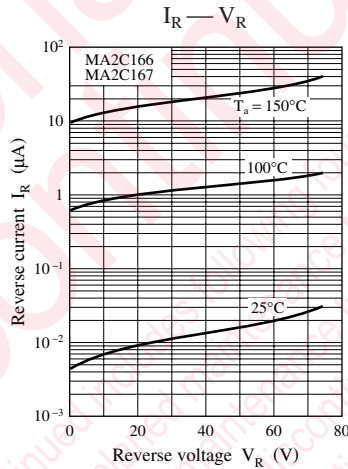
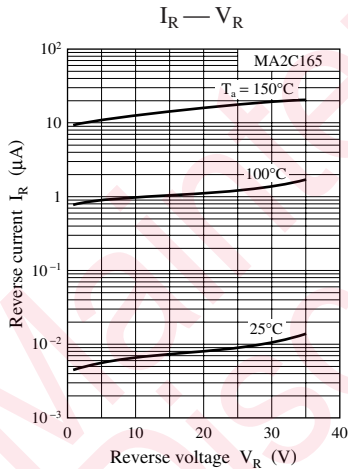
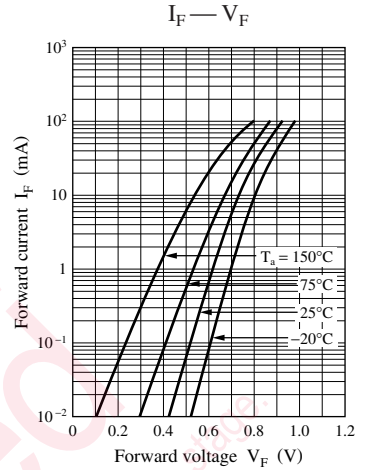
## ■ Cathode Indication

Type No.	MA2C165	MA2C166	MA2C167
Color	White	Green	Violet

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



$t_{tr}$  measurement circuit



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