

# 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) \* :  $t = 1$  s

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

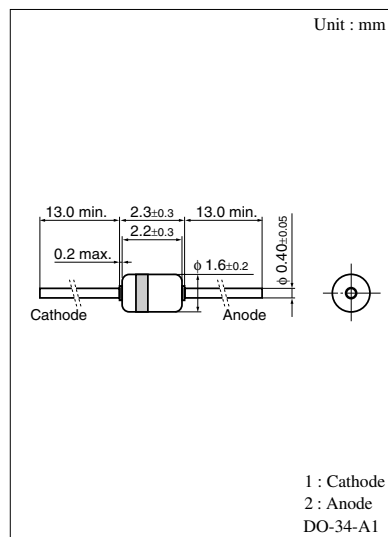
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current (DC)	MA2C165	$V_R = 15$ V			0.025	$\mu\text{A}$
		$V_R = 30$ V			0.1	
	MA2C166	$V_R = 15$ V			0.025	
		$V_R = 50$ V			5	
	MA2C167	$V_R = 20$ V		0.012	0.025	
		$V_R = 75$ V			5	
	MA2C165	$V_R = 35$ V, $T_a = 150^\circ\text{C}$			100	
	MA2C166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

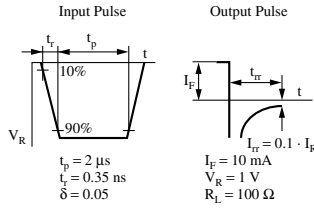
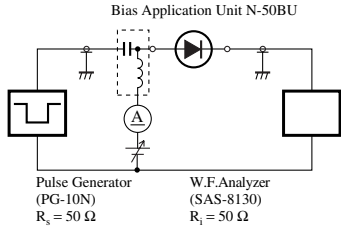
Note) 1. Rated input/output frequency: 100 MHz (MA2C165), 250 MHz (MA2C167), 1 000 MHz (MA2C166) 2. \* :  $t_{rr}$  measuring circuit

## ■ Cathode Indication

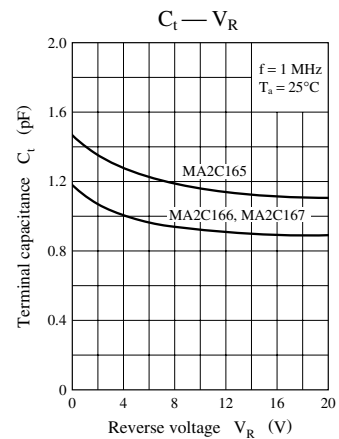
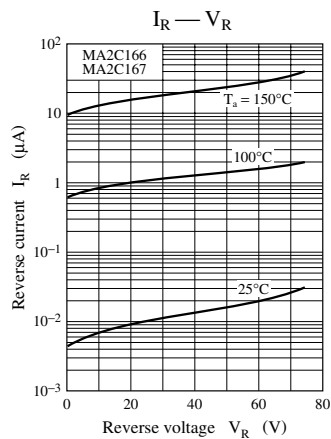
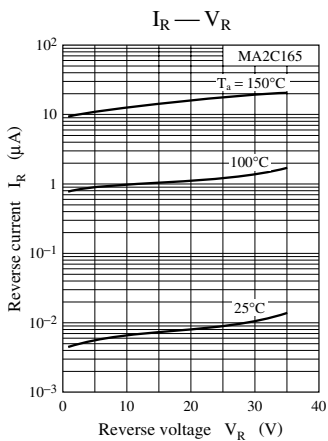
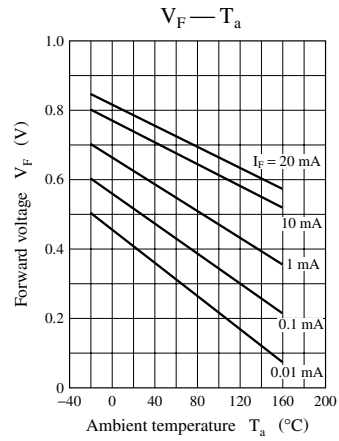
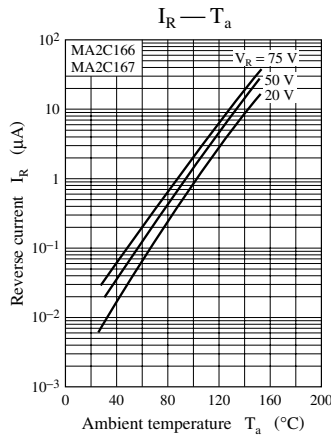
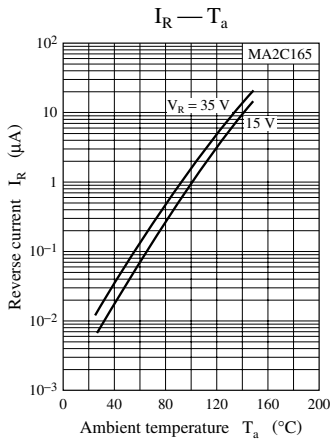
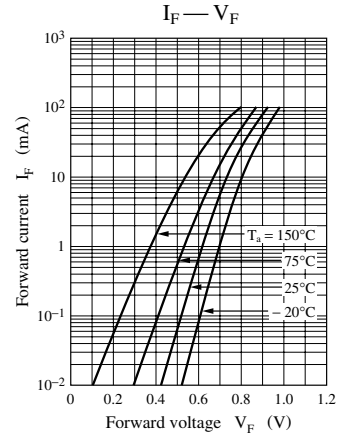
Type No.	MA2C165	MA2C166	MA2C167
Color	White	Green	Violet

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





$t_{tr}$  measuring circuit



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