

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 $T_a = 25^\circ\text{C}$

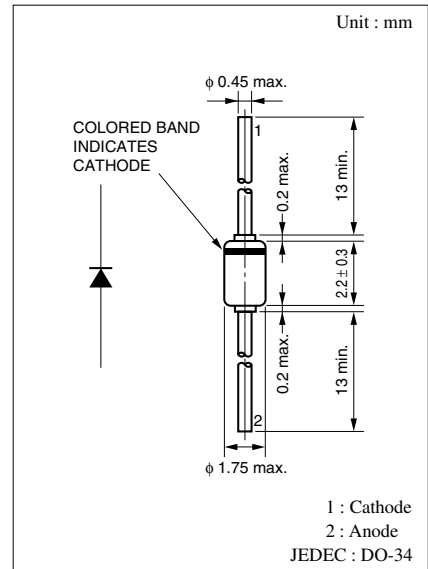
Parameter	Symbol	Conditions	Min	Typ	Max	Unit	
Reverse current (DC)	MA2C165	I_R	$V_R = 15 \text{ V}$		0.025	μA	
			$V_R = 30 \text{ V}$		0.1		
	MA2C166	I_R	$V_R = 15 \text{ V}$		0.025		
			$V_R = 50 \text{ V}$		5		
	MA2C167	I_R	$V_R = 20 \text{ V}$	0.012	0.025		
			$V_R = 75 \text{ V}$		5		
	MA2C165	I_R	$V_R = 35 \text{ V}, T_a = 150^\circ\text{C}$		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
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	t_{rr}	$I_F = 10 \text{ mA}, V_R = 1 \text{ V},$ $I_{tr} = 0.1 \cdot I_R, R_L = 100 \Omega$		10	ns	
	MA2C166/167				2.2		4

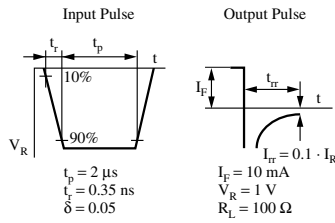
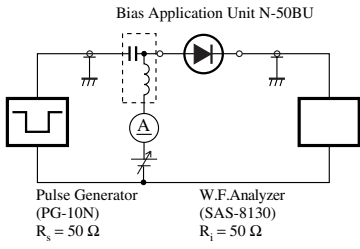
Note) 1. Rated input/output frequency: 100 MHz (MA2C165), 250 MHz (MA2C167), 1 000 MHz (MA2C166) 2. * : t_{rr} measuring circuit

■ Cathode Indication

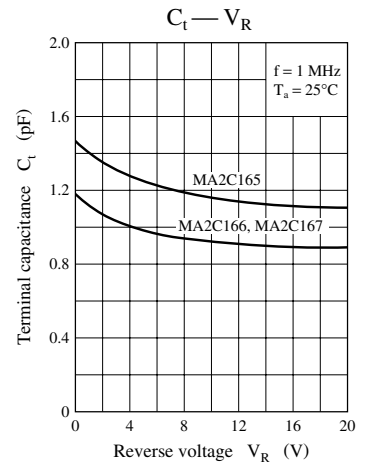
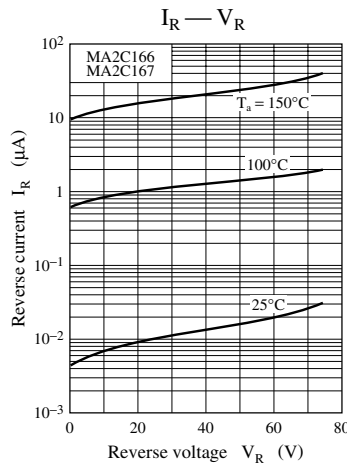
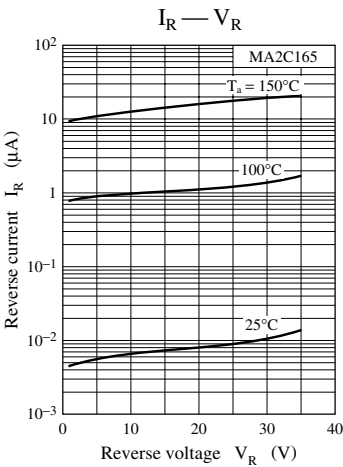
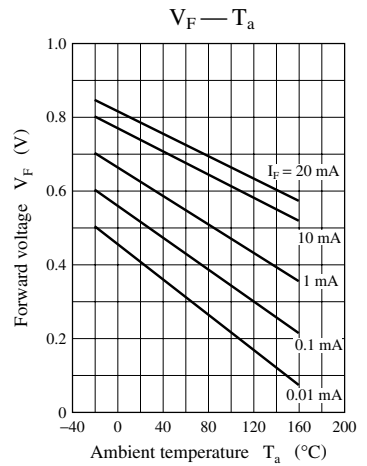
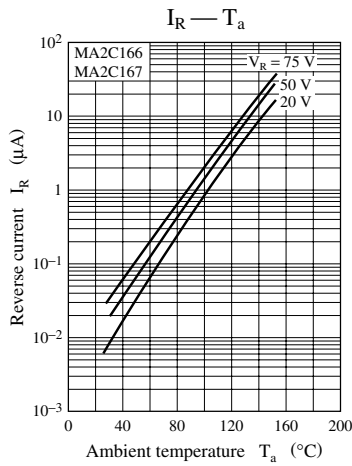
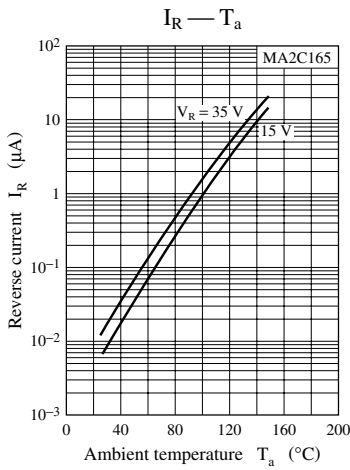
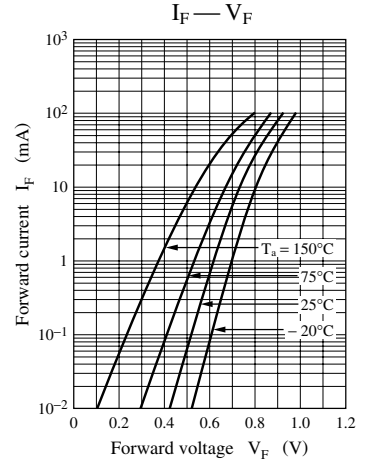
Type No.	MA2C165	MA2C166	MA2C167
Color	White	Green	Violet

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





t_{rr} measuring circuit



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