

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_R	35	V
		50	
		75	
Repetitive peak reverse voltage	V_{RRM}	35	V
		50	
		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 $T_a = 25^\circ\text{C}$

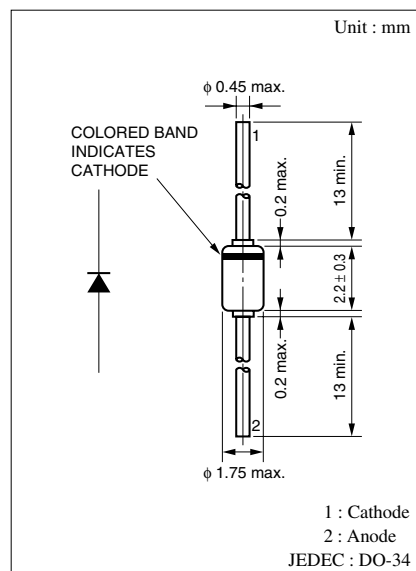
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current (DC)	MA2C165	I_R $V_R = 15 \text{ V}$			0.025	μA
					0.1	
	MA2C166	$V_R = 15 \text{ V}$			0.025	
					5	
	MA2C167	$V_R = 20 \text{ V}$		0.012	0.025	
					5	
	MA2C165	$V_R = 35 \text{ V}, T_a = 150^\circ\text{C}$			100	
	MA2C166	$V_R = 50 \text{ V}, T_a = 150^\circ\text{C}$			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)	MA2C165	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	

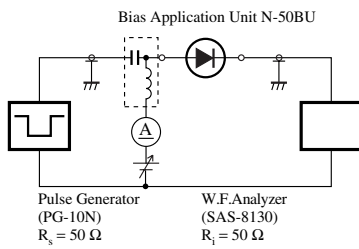
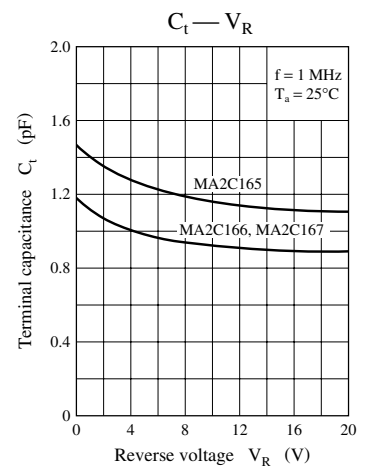
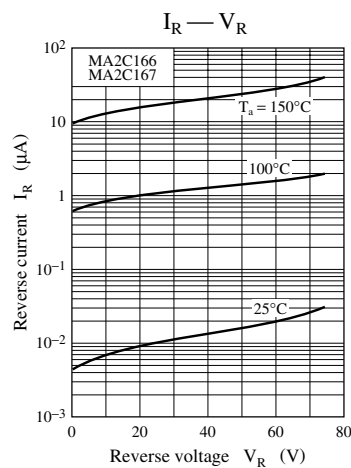
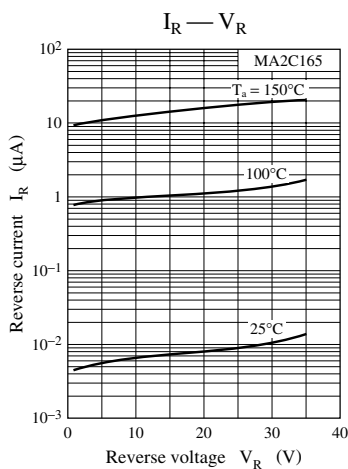
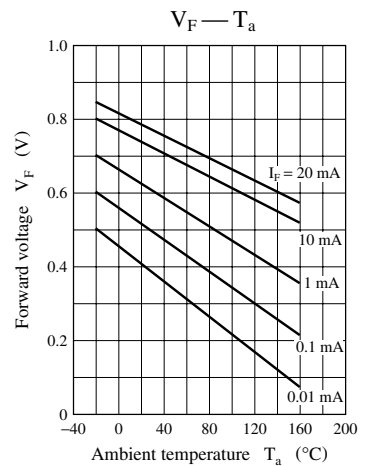
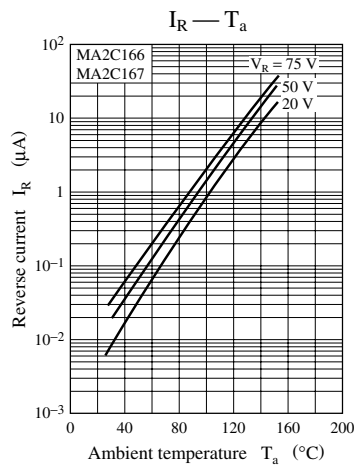
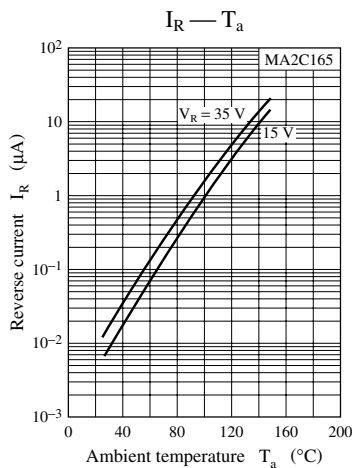
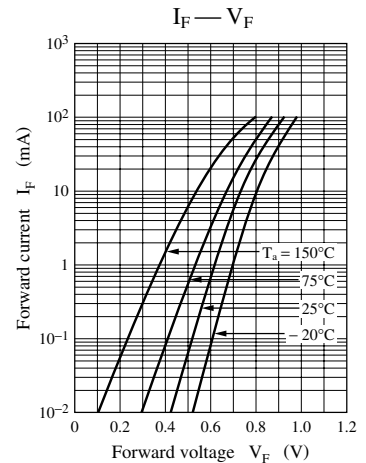
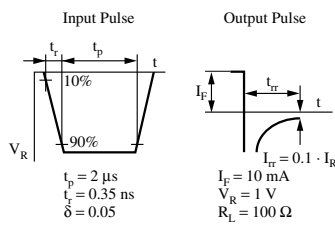
Note) 1. Rated input/output frequency: 100 MHz (MA2C165), 250 MHz (MA2C167), 1 000 MHz (MA2C166) 2. * : t_{rr} measuring circuit

■ 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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