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

Silicon epitaxial planar type

For switching circuits

■ Features

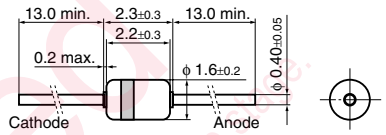
- Short reverse recovery time t_{rr}
- Small terminal capacitance C_t

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter		Symbol	Rating	Unit
Reverse voltage	MA2C165	V_R	35	V
	MA2C166		50	
	MA2C167		75	
Repetitive peak reverse voltage	MA2C165	V_{RRM}	35	V
	MA2C166		50	
	MA2C167		75	
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	°C
Storage temperature		T_{stg}	−55 to +200	°C

Note) *: t = 1 s

Unit: mm



1: Cathode
2: Anode
DO-34-A1 Package

■ Electrical Characteristics $T_a = 25°C \pm 3°C$

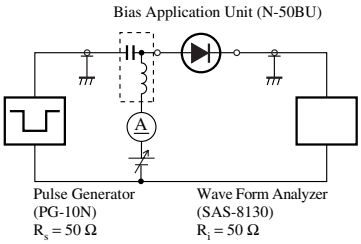
Parameter		Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage		V_F	$I_F = 100$ mA		0.95	1.20	V
Reverse voltage	MA2C165	V_R	$I_R = 5$ µA	35			V
Reverse current	MA2C165	I_{R1}	$V_R = 15$ V			25	nA
	MA2C166		$V_R = 15$ V			25	
	MA2C167		$V_R = 20$ V			25	
	MA2C165	I_{R2}	$V_R = 30$ V			100	nA
	MA2C166		$V_R = 50$ V			5	µA
	MA2C167		$V_R = 75$ V			5	
	MA2C165	I_{R3}	$V_R = 35$ V, $T_a = 150°C$			100	µA
	MA2C166		$V_R = 50$ V, $T_a = 150°C$			100	
	MA2C167		$V_R = 75$ V, $T_a = 150°C$			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	

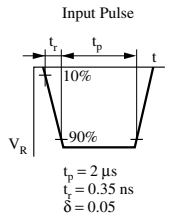
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.
2. Absolute frequency of input and output is 100 MHz (MA2C165), 1 000 MHz (MA2C166), 250MHz (MA2C167).
3. *: t_{rr} measurement circuit

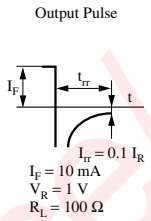
■ Cathode Indication

Type No.	MA2C165	MA2C166	MA2C167
Color	White	Green	Violet

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

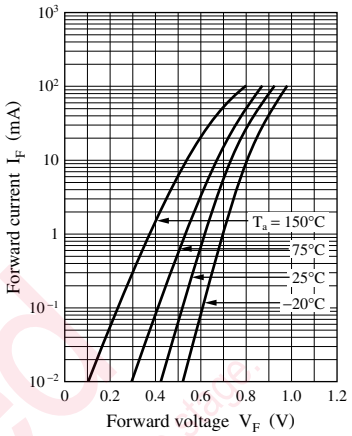




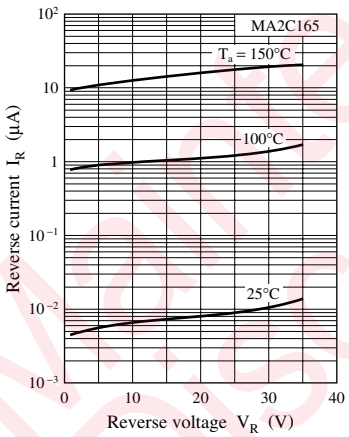


t_{rr} measurement circuit

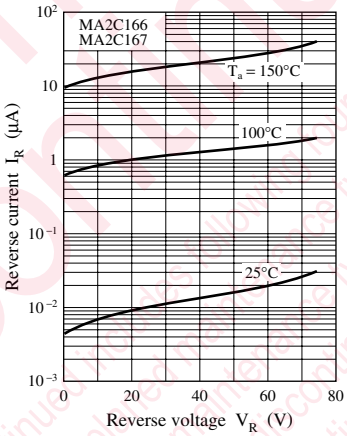
I_F — V_F



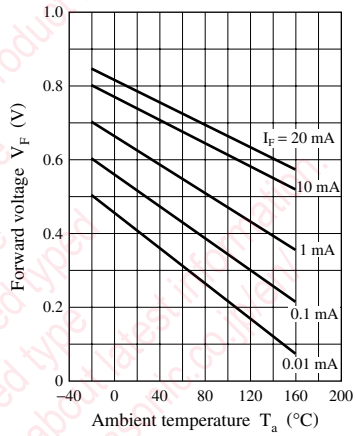
I_R — V_R



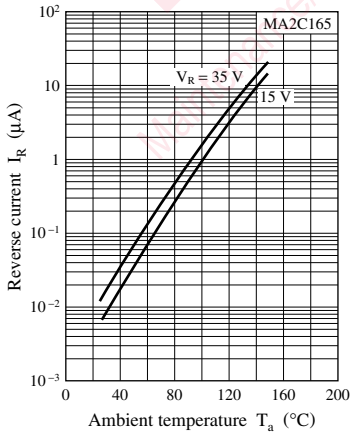
I_R — V_R



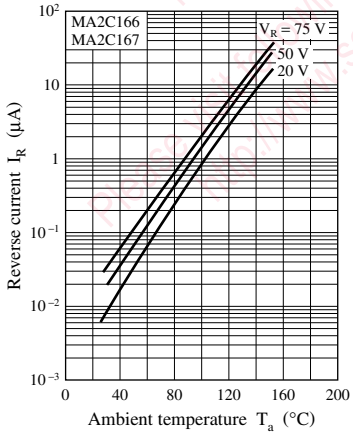
V_F — T_a



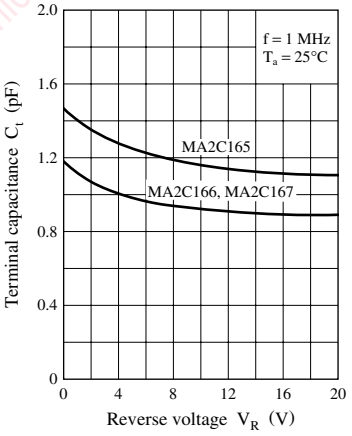
I_R — T_a



I_R — T_a



C_t — V_R



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