

MA221, MA222, MA223

Silicon epitaxial planer type

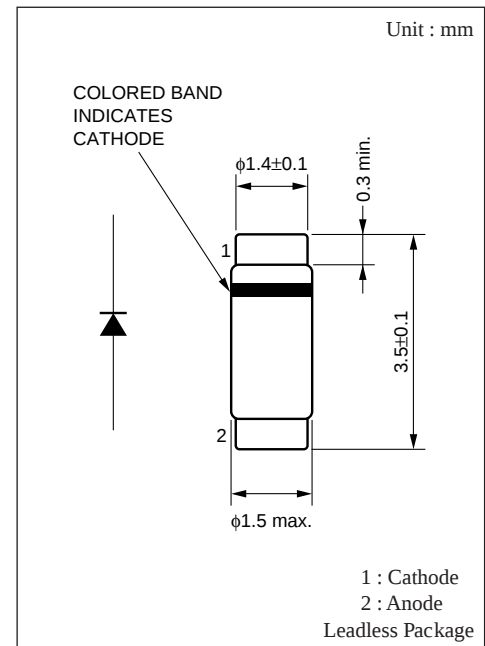
For high speed switching circuits

■ Features

- Extra-small cylindrical package, most favorable for high-density mounting
- Overall dimensions similar to those of resistor and capacitor (1/8W type), enabling sharing of the mounted equipment
- High switching speed and small capacity between pins, C_t

■ Absolute Maximum Ratings (Ta= 25°C)

Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	V_R	MA221 35	V
		MA222 50	
		MA223 75	
Repetitive peak reverse voltage	V_{RRM}	MA221 35	V
		MA222 50	
		MA223 75	
Average forward current	$I_{F(AV)}$	100	mA
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 +150	°C

* $t=1s$ 

■ Electrical Characteristics (Ta= 25°C)

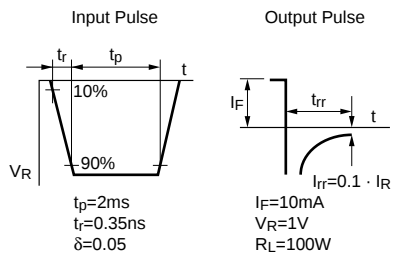
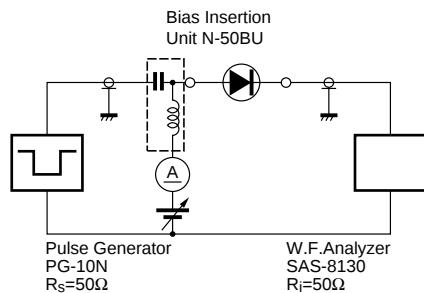
Parameter	Symbol	Condition	min	typ	max	Unit
Reverse current (DC)	MA221	I_R	$V_R=15V$		25	nA
			$V_R=30V$		0.1	μA
			$V_R=15V$		25	nA
	MA222	I_R	$V_R=50V$		5	μA
			$V_R=20V$		25	nA
			$V_R=75V$		5	μA
	MA223	I_R	$V_R=35V, T_a=150^\circ C$		100	μA
			$V_R=50V, T_a=150^\circ C$		100	
			$V_R=75V, T_a=150^\circ C$		100	
Forward voltage (DC)	V_F	$I_F=100mA$		0.95	1.2	V
Reverse voltage (DC)	MA221 V_R	$I_R=5\mu A$	35			V
Terminal capacitance	C_t	$V_R=0V, f=1MHz$			2	pF
Reverse recovery time	MA221	t_{rr}^*	$I_F=10mA, V_R=1V$		10	ns
	MA222/223		$I_{rr}=0.1 \cdot I_R, R_L=100\Omega$	2.2	4	

❖ Rated input/output frequency : 100MHz (MA221), 250MHz (MA222, MA223)

■ Cathode Indication

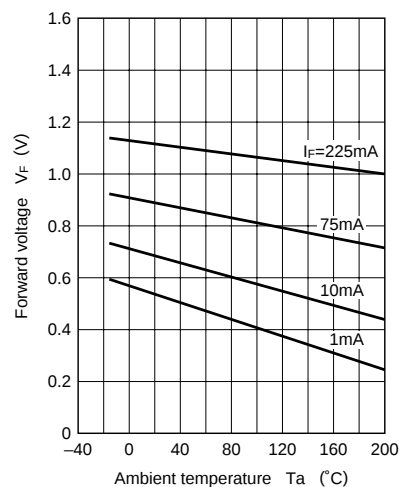
Type No.	MA221	MA222	MA223
Color	White	Green	Purple

* t_{rr} measuring circuit



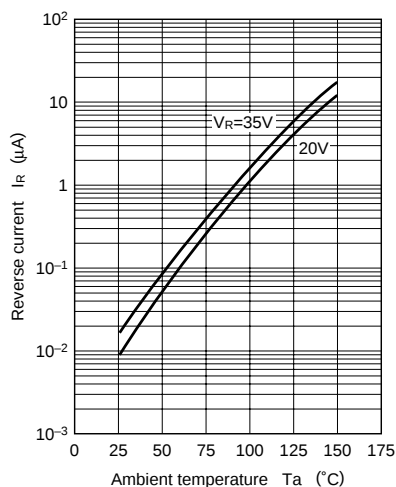
Common characteristics chart

$V_F - T_a$

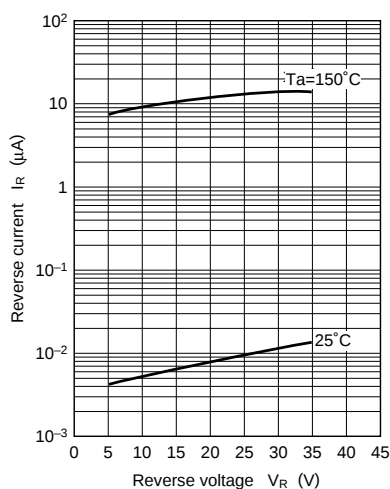


Characteristics chart of MA221

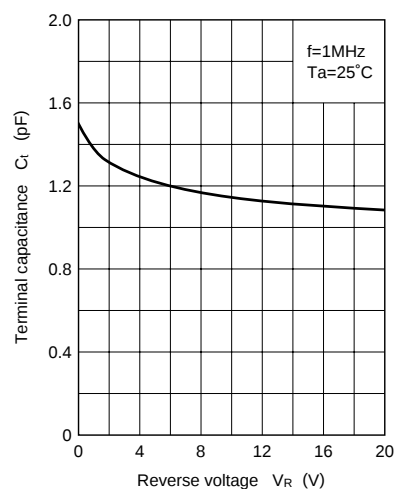
$I_R - T_a$



$I_R - V_R$

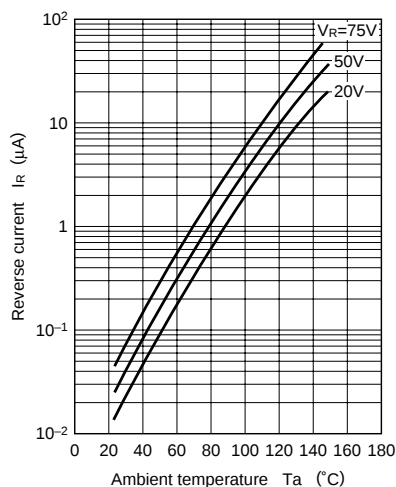


$C_t - V_R$

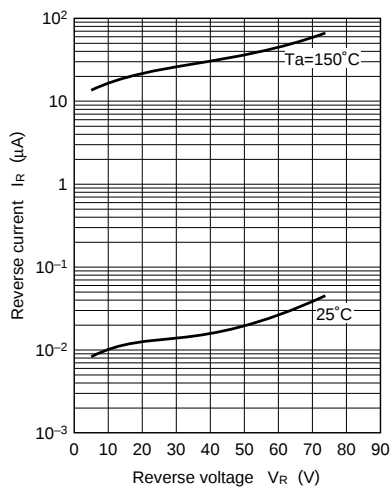


Characteristics chart of MA222 and MA223

$I_R - T_a$



$I_R - V_R$



$C_t - V_R$

