

# MA3X199 (MA199)

## Silicon epitaxial planar type

For high voltage switching circuit

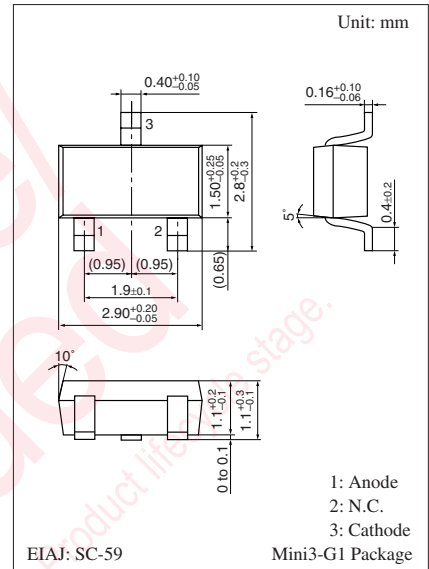
### ■ Features

- High breakdown voltage:  $V_R = 200\text{ V}$
- Short reverse recovery time  $t_{rr}$
- Automatic mounting is possible

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

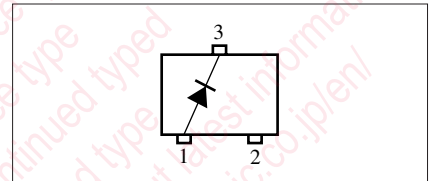
Parameter	Symbol	Rating	Unit
Reverse voltage	$V_R$	200	V
Repetitive peak reverse voltage	$V_{RRM}$	250	V
Forward current (Average)	$I_{F(AV)}$	100	mA
Repetitive peak forward current	$I_{FRM}$	225	mA
Non-repetitive peak forward surge current *	$I_{FSM}$	500	mA
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

Note) \*:  $t = 1\text{ s}$



Marking Symbol: M3A

Internal Connection



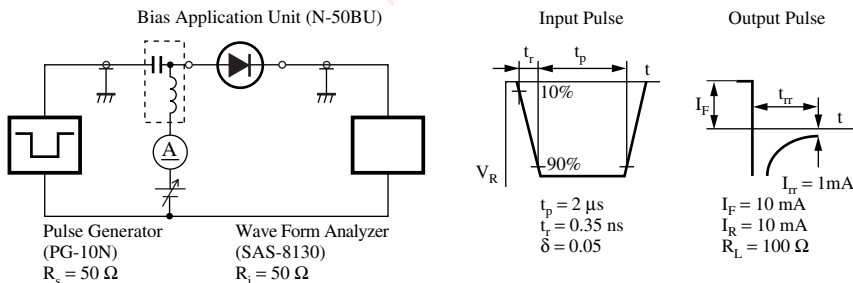
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	$V_F$	$I_F = 100\text{ mA}$			1.2	V
Reverse current	$I_R$	$V_R = 200\text{ V}$			1.0	$\mu\text{A}$
Terminal capacitance	$C_t$	$V_R = 0\text{ V}, f = 1\text{ MHz}$			3.0	pF
Reverse recovery time *	$t_{rr}$	$I_F = I_R = 10\text{ mA}$ $I_{rr} = 1\text{ mA}, R_L = 100\ \Omega$			60	ns

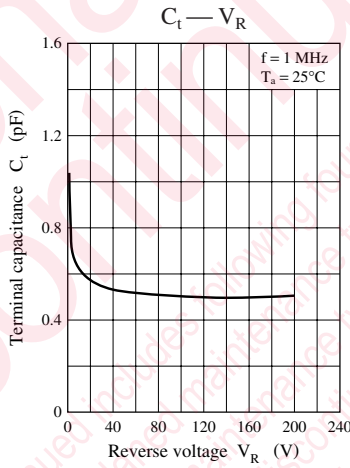
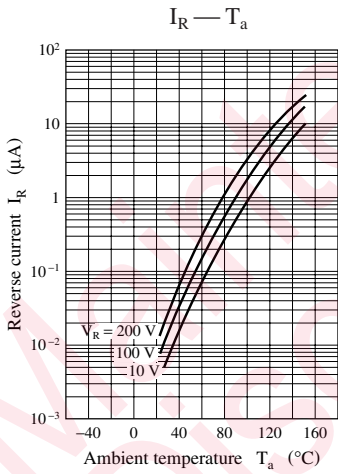
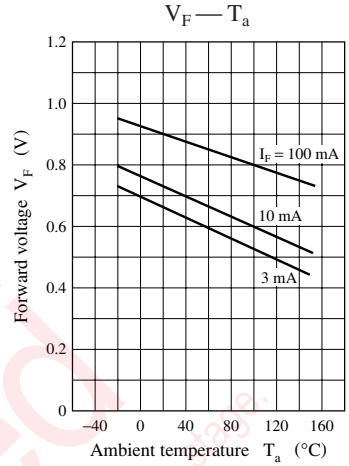
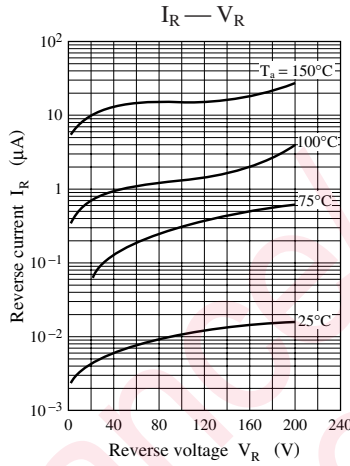
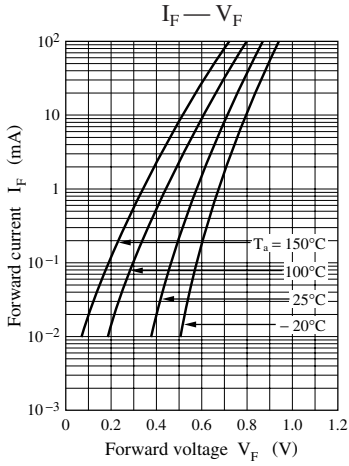
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

2. Absolute frequency of input and output is 20 MHz.

3. \*:  $t_{rr}$  measurement circuit



Note) The part number in the parenthesis shows conventional part number.



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