

MA4X194 (MA194)

Silicon epitaxial planar type

For switching circuits

■ Features

- Small terminal capacitance C_t
- Two isolated elements contained in one package, allowing high-density mounting

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

Parameter	Symbol	Rating	Unit
Reverse voltage	V_R	40	V
Repetitive peak reverse voltage	V_{RRM}	40	V
Forward current (Average)	Single	$I_{F(AV)}$	100
	Double		75
Repetitive peak forward current	Single	I_{FRM}	225
	Double		170
Non-repetitive peak forward surge current *	Single	I_{FSM}	500
	Double		375
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	V_F	$I_F = 100\text{ mA}$		0.98	1.20	V
Reverse current	I_{R1}	$V_R = 40\text{ V}$			10	nA
	I_{R2}	$V_R = 35\text{ V}, T_a = 150^\circ\text{C}$			10	μA
Terminal capacitance	C_t	$V_R = 6\text{ V}, f = 1\text{ MHz}$		1.0	2.0	pF
Forward dynamic resistance	r_f^{*1}	$I_F = 3\text{ mA}, f = 30\text{ MHz}$		1.7	2.5	Ω
	r_f^{*2}	$I_F = 3\text{ mA}, f = 30\text{ MHz}$			3.6	
Reverse recovery time *3	t_{rr}	$I_F = 10\text{ mA}, V_R = 6\text{ V}$ $I_{tr} = 0.1 I_R, R_L = 100\ \Omega$			100	ns

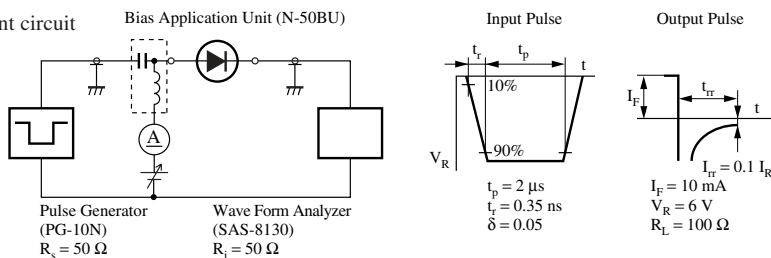
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

2. Absolute frequency of input and output is 10 MHz.

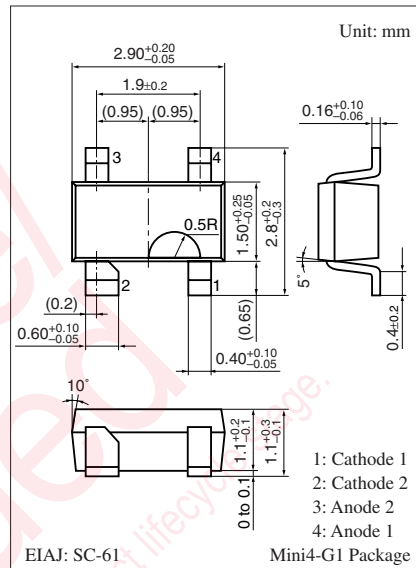
3. *1: r_f measuring instrument: Nihon Koshuha Model TDC-121A

*2: r_f measuring instrument: YHP 4191A RF IMPEDANCE ANALYZER

*3: t_{rr} measurement circuit

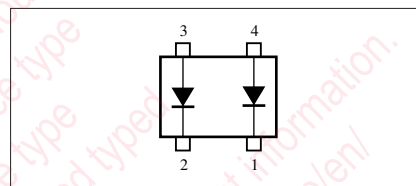


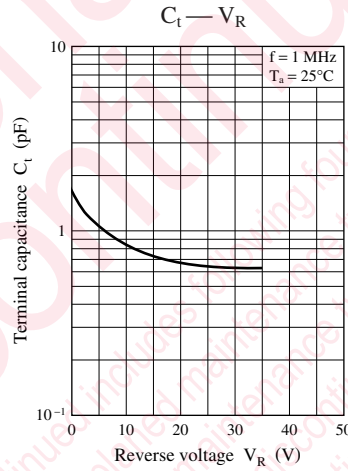
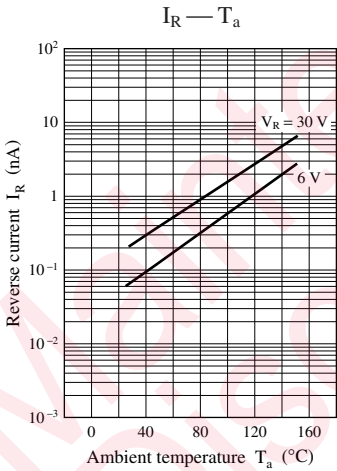
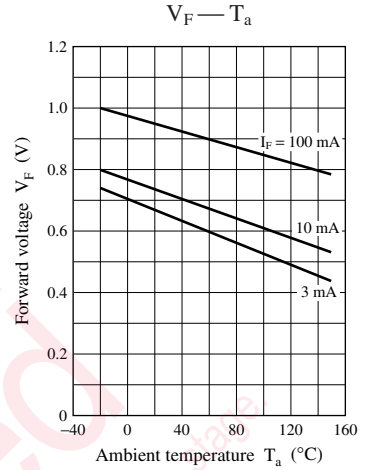
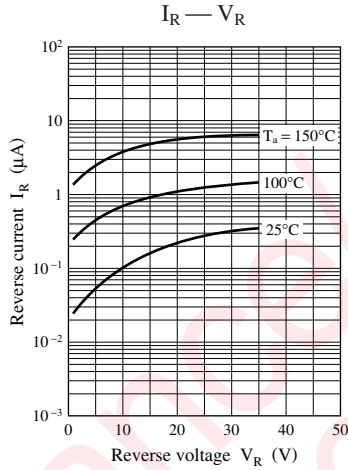
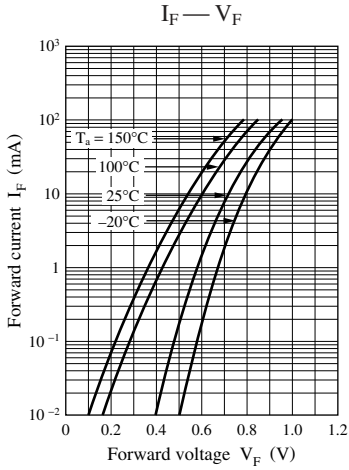
Note) The part number in the parenthesis shows conventional part number.



Marking Symbol: M1F

Internal Connection





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