

MA4X194 (MA194)

Silicon epitaxial planar type

For switching circuits

■ Features

- Short reverse recovery time t_{rr}
- 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 (DC)	V_R	40	V
Repetitive peak reverse voltage	V_{RRM}	40	V
Average forward current	Single	$I_{F(AV)}$	100 mA
	Double	$I_{F(AV)}$	75 mA/Unit
Repetitive peak forward current	Single	I_{FRM}	225 mA
	Double	I_{FRM}	170 mA/Unit
Non-repetitive peak forward surge current*	Single	I_{FSM}	500 mA
	Double	I_{FSM}	375 mA/Unit
Power dissipation	P_D	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

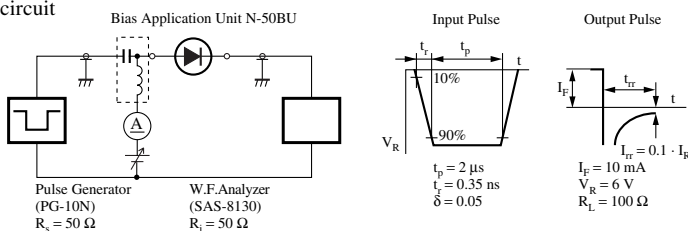
■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current (DC)	I_{R1}	$V_R = 40 \text{ V}$			10	nA
	I_{R2}	$V_R = 35 \text{ V}, T_a = 150^\circ\text{C}$			10	μA
Forward voltage (DC)	V_F	$I_F = 100 \text{ mA}$		0.98	1.2	V
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}	$I_F = 10 \text{ mA}, V_R = 6 \text{ V}$ $I_{rr} = 0.1 \cdot I_R, R_L = 100 \Omega$			100	ns

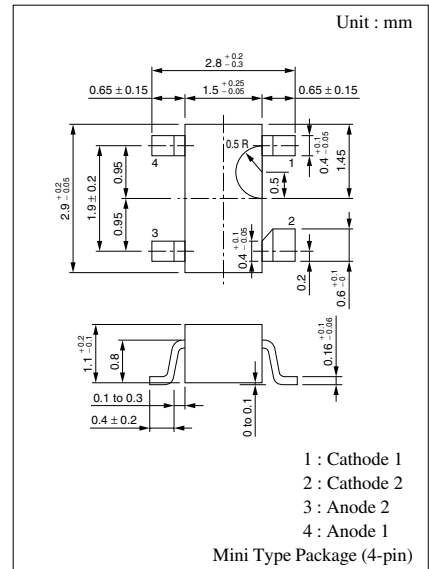
Note) *1 : r_f measuring instrument: Nihon Koshuha Model TDC-121A

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

*3 : t_{rr} measuring circuit

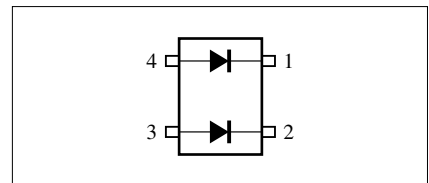


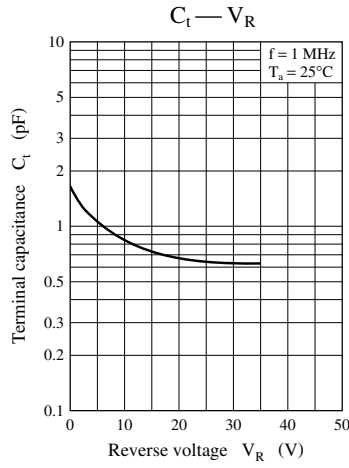
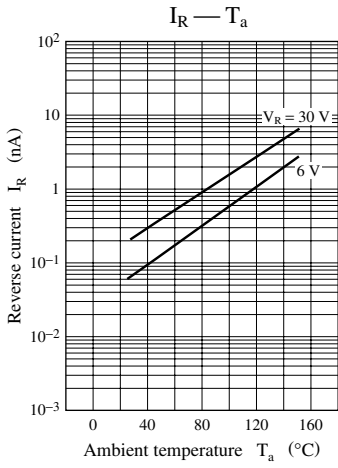
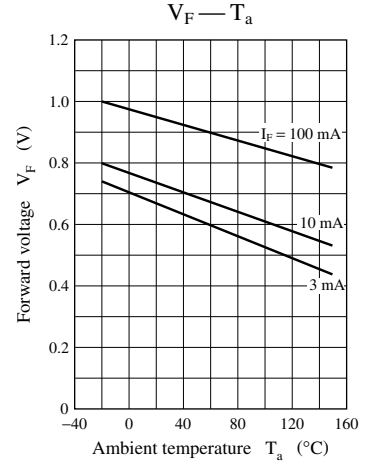
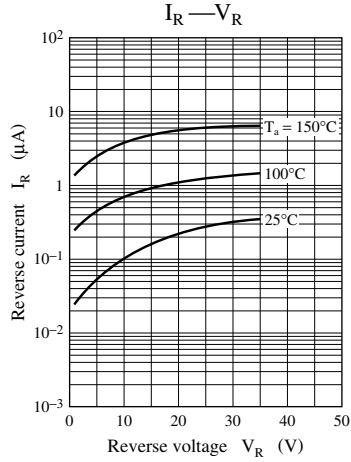
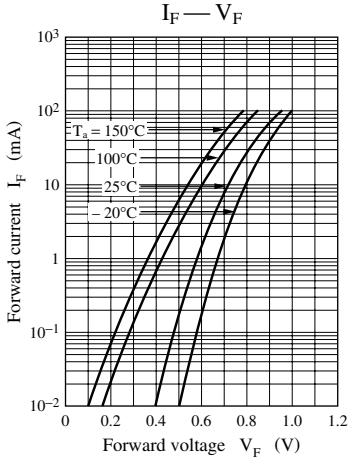
Note) The part number in the parenthesis shows conventional part number.



Marking Symbol: M1F

Internal Connection





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