MA4X194 (MA194)

Silicon epitaxial planar type

For switching circuits

■ Features

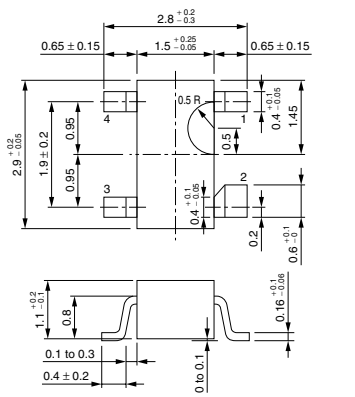
- Short reverse recovery time t_{rr}
- Two isolated elements contained in one package, allowing high-density mounting

■ Absolute Maximum Ratings $T_a = 25°C$

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	°C
Storage temperature		T_{stg}	−55 to +150	°C

Note) * : t = 1 s

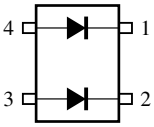
Unit : mm



1 : Cathode 1
2 : Cathode 2
3 : Anode 2
4 : Anode 1
Mini Type Package (4-pin)

Marking Symbol: M1F

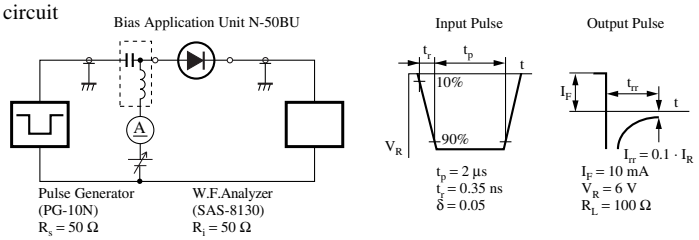
Internal Connection



■ Electrical Characteristics $T_a = 25°C$

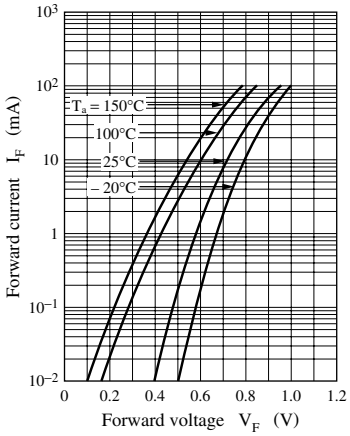
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current (DC)	I_{R1}	V_R = 40 V			10	nA
	I_{R2}	V_R = 35 V, T_a = 150°C			10	µA
Forward voltage (DC)	V_F	I_F = 100 mA		0.98	1.2	V
Terminal capacitance	C_t	V_R = 6 V, f = 1 MHz		1.0	2.0	pF
Forward dynamic resistance	r_f*1	I_F = 3 mA, f = 30 MHz		1.7	2.5	Ω
	r_f*2	I_F = 3 mA, f = 30 MHz			3.6	
Reverse recovery time*3	t_{rr}	I_F = 10 mA, V_R = 6 V I_{rr} = 0.1 · I_R, R_L = 100 Ω			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

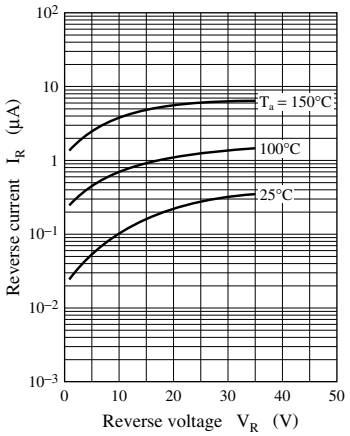


Note) The part number in the parenthesis shows conventional part number.

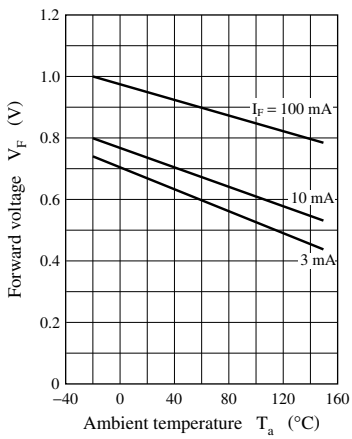
I_F — V_F



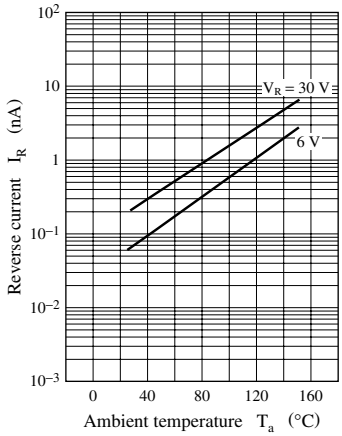
I_R — V_R



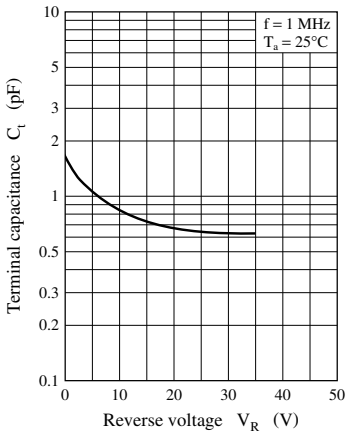
V_F — T_a



I_R — T_a



C_t — V_R



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