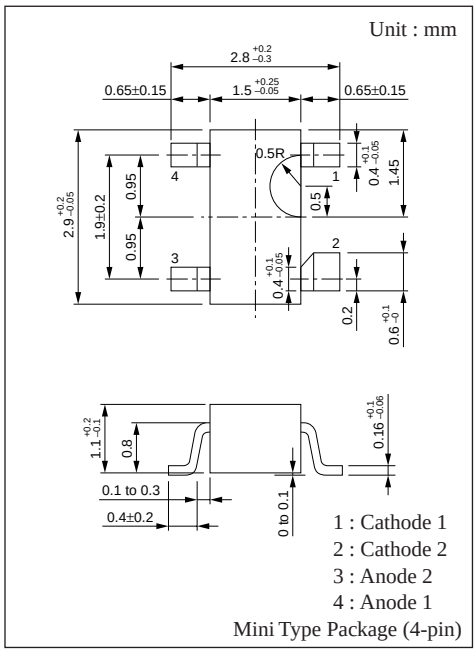
MA194

Silicon epitaxial planer type

For switching circuits

■ Features

- Small capacity between pins, C_t
- Independent two-diode type enabling high-density mounting



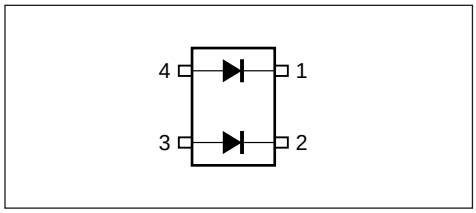
Marking Symbol : M1F

■ Absolute Maximum Ratings (Ta= 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

* t=1s

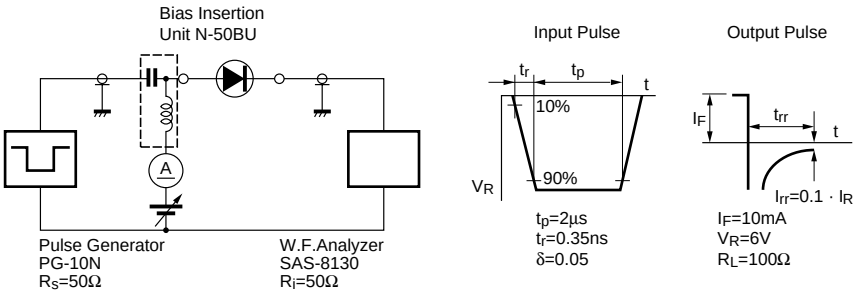
■ Internal Connection



■ Electrical Characteristics (Ta= 25˚C)

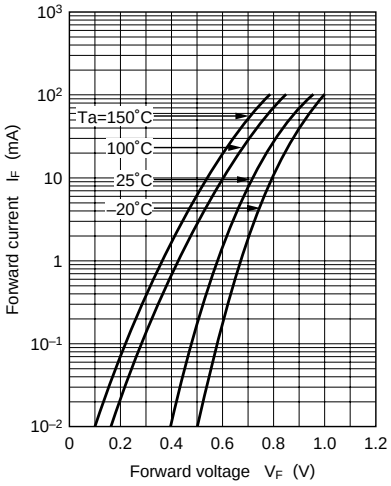
Parameter	Symbol	Condition	min	typ	max	Unit
Reverse current (DC)	I_{R1}	V_R= 40V			10	nA
	I_{R2}	V_R= 35V, Ta=150˚C			10	µA
Forward voltage (DC)	V_F	I_F=100mA		0.98	1.2	V
Terminal capacitance	C_t	V_R= 6V, f=1MHz		1.0	2.0	pF
Forward dynamic resistance	r_{fr} *1	I_F= 3mA, f= 30MHz		1.7	2.5	Ω
	r_{fr} *2	I_F= 3mA, f= 30MHz			3.6	
Reverse recovery time	t_{rrr} *3	I_F=10mA, V_R=6V I_{rr}= 0.1 · I_R, R_L=100Ω			100	ns

*1 r_f measurement device : Nihon Koshuha Model TDC-121A
*2 r_f measurement device : YHP 4191A RF IMPEDANCE ANALYZER
*3 t_{rr} measuring circuit

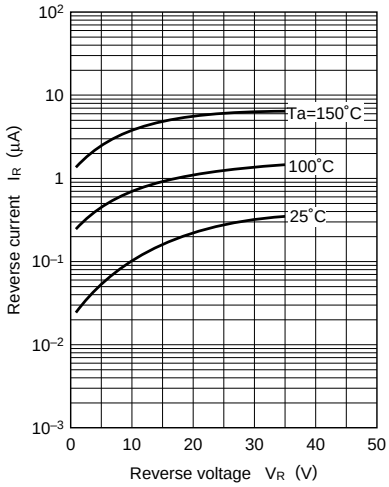


■ Marking

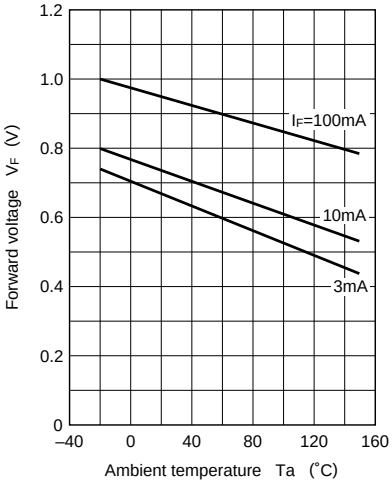
$I_F - V_F$



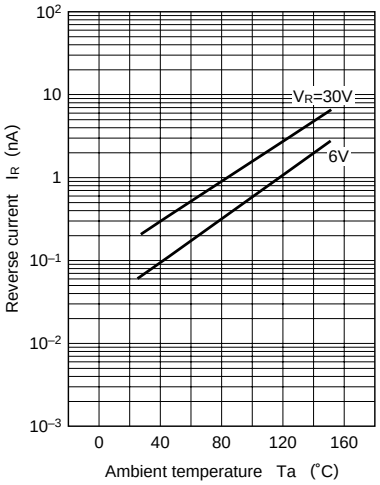
$I_R - V_R$



$V_F - Ta$



$I_R - Ta$



$C_t - V_R$