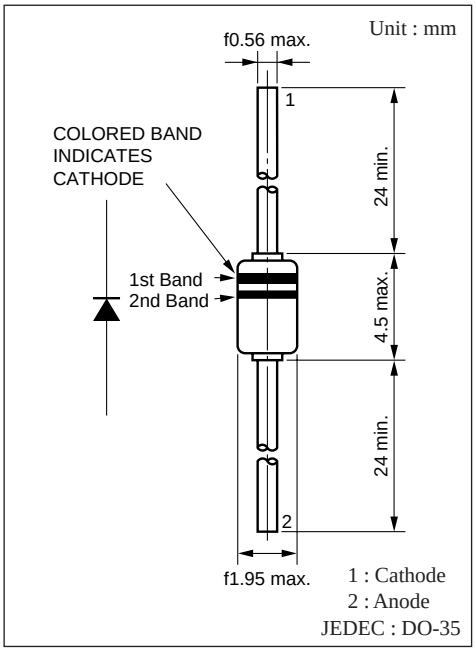
MA190

Silicon epitaxial planer type

For switching circuits



■ Features

- Low forward dynamic resistance r_f
- Small capacity between pins, C_t

■ Absolute Maximum Ratings (Ta= 25˚C)

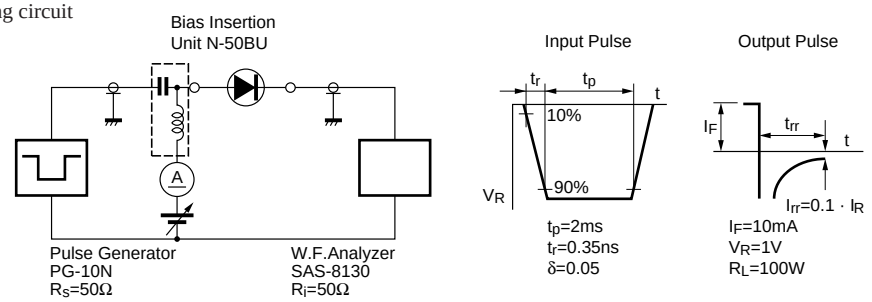
Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	V_R	35	V
Repetitive peak reverse voltage	V_{RRM}	35	V
Average forward current	$I_{F\ (AV)}$	100	mA
Repetitive peak forward current	I_{FRM}	225	mA
Non-repetitive peak forward surge current	I_{FSM} *	500	mA
Junction temperature	T_j	200	˚C
Storage temperature	T_{stg}	– 55 to + 200	˚C

* t=1s

■ Electrical Characteristics (Ta= 25˚C)

Parameter	Symbol	Condition	min	typ	max	Unit
Reverse current (DC)	I_{R1}	V_R=15V			0.005	µA
	I_{R2}	V_R= 30V			0.01	µA
	I_{R3}	V_R= 35V, Ta=150˚C			100	µA
Forward voltage (DC)	V_F	I_F=100mA			1.2	V
Reverse voltage (DC)	V_R	I_R=100µA	35			V
Terminal capacitance	C_t	V_R= 0V, f=1MHz			4	pF
Forward dynamic resistance	r_{fr} *1	I_F= 3mA, f= 30MHz			2.5	Ω
	r_{fr} *2	I_F= 3mA, f= 30MHz			3.6	Ω
Reverse recovery time	t_{rrr} *3	I_F=10mA, V_R=1V I_{rr}= 0.1 · I_R, R_L=100Ω			0.2	ms

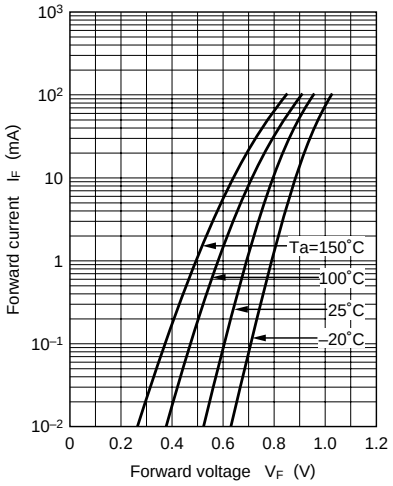
Note 1 : Rated input/output frequency : 2.5kHz
2 : *1 r_f measurement device : Nihon Koshuha Model TDC-121A
*2 r_f measurement device : YHP 4191A RF IMPEDANCE ANALYZER
*3 t_{rr} measuring circuit



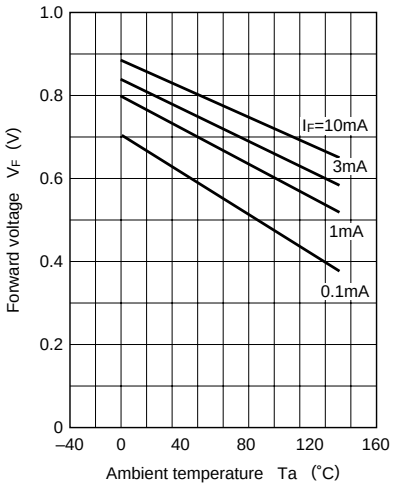
■ Cathode Indication

Type No.		MA190
Color	1st Band	White
	2nd Band	White

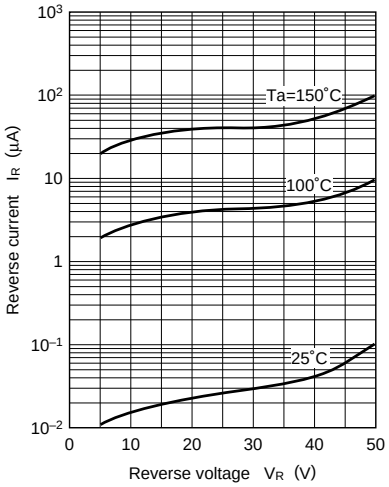
$I_F - V_F$



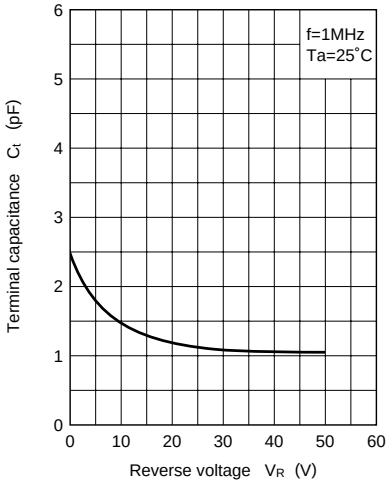
$V_F - Ta$



$I_R - V_R$



$C_t - V_R$



$r_f - I_F$