

MA745

Silicon epitaxial planer type

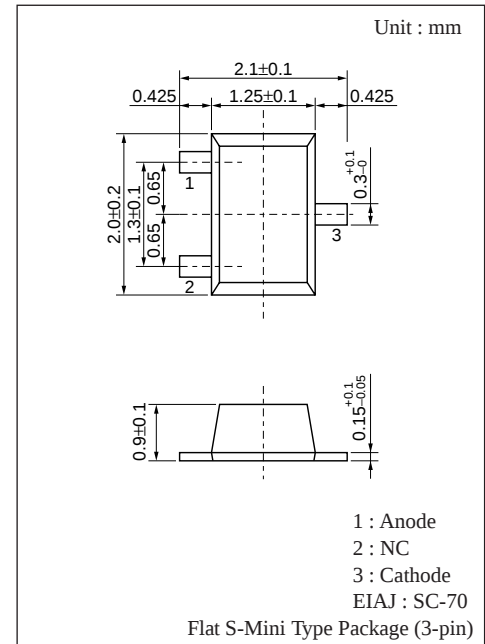
For the switching circuit

■ Features

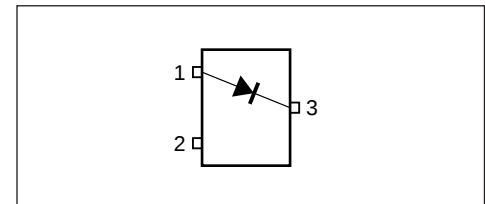
- Low forward rise voltage V_F , optimum for low-voltage rectification (Low V_F type of MA704A)
- Fast reverse recovery time t_{rr} , optimum for high-frequency rectification

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

Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	V_R	30	V
Peak reverse voltage	V_{RM}	30	V
Forward current (DC)	I_F	30	mA
Peak forward current	I_{FM}	150	mA
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature	T_{stg}	- 55 to + 125	$^\circ\text{C}$



■ Internal Connection



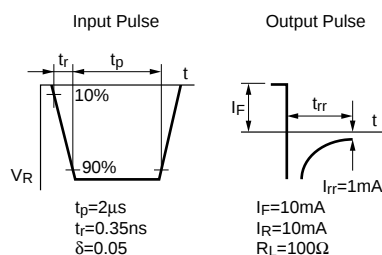
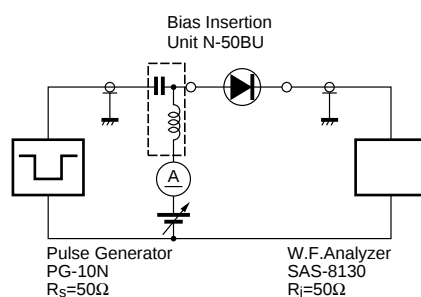
■ Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Condition	min	typ	max	Unit
Reverse current (DC)	I_R	$V_R = 30\text{V}$			30	μA
Forward voltage (DC)	V_{F1}	$I_F = 1\text{mA}$			0.3	V
	V_{F2}	$I_F = 30\text{mA}$			1.0	V
Terminal capacitance	C_t	$V_R = 1\text{V}$, $f = 1\text{MHz}$		1.5		pF
Reverse recovery time	t_{rr}^*	$I_F = I_R = 10\text{mA}$ $I_{rr} = 1\text{mA}$, $R_L = 100\Omega$		1.0		ns
Detection efficiency	η	$V_{in} = 3V_{(peak)}$, $f = 30\text{MHz}$ $R_L = 3.9\text{k}\Omega$, $C_L = 10\text{pF}$		65		%

Note 1. Schottky barrier diode is sensitive to electric shock (static electricity, etc.). Due attention must be paid on charge of a human body and leakage from the equipment used.

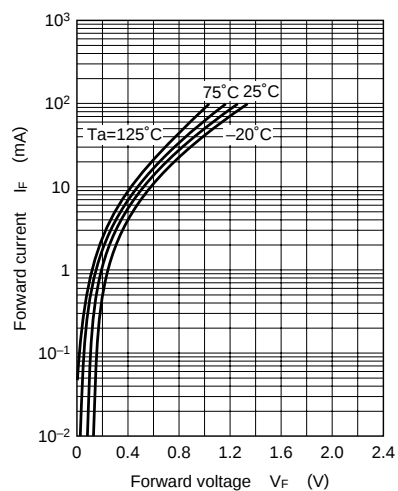
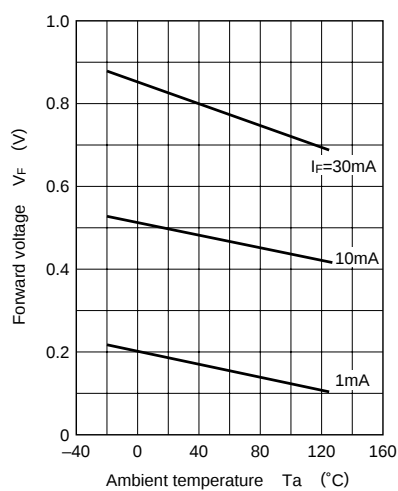
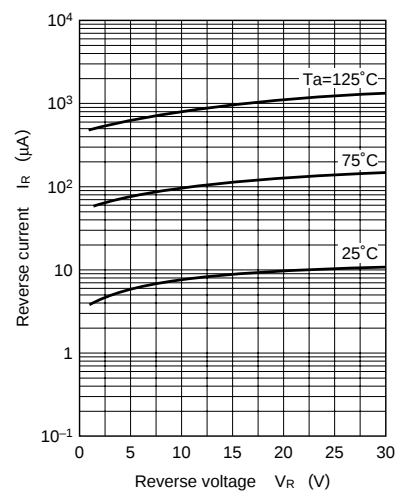
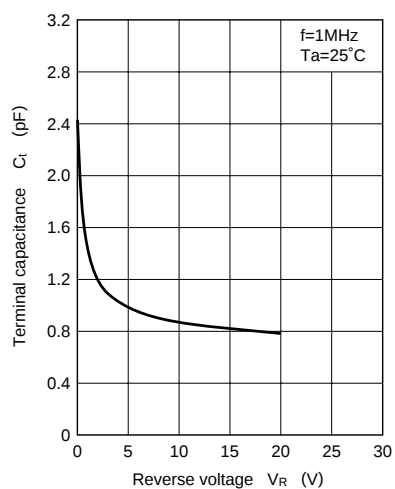
2. Rated input/output frequency : 2000MHz

3. * t_{rr} measuring circuit



■ Marking



$I_F - V_F$  $V_F - T_a$  $I_R - V_R$  $C_t - V_R$  $I_R - T_a$ 