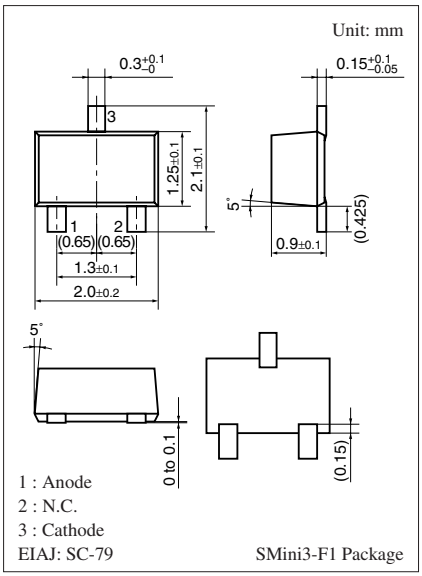
MA3J745 (MA745)

Silicon epitaxial planar type

For switching

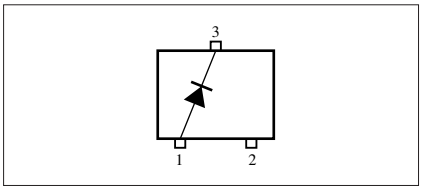
■ Features

- Forward voltage V_F , optimum for low voltage rectification
- Low V_F type of MA3X704A (MA704A)
- Optimum for high frequency rectification because of its short reverse recovery time t_{rr}



Marking Symbol: M2M

Internal Connection



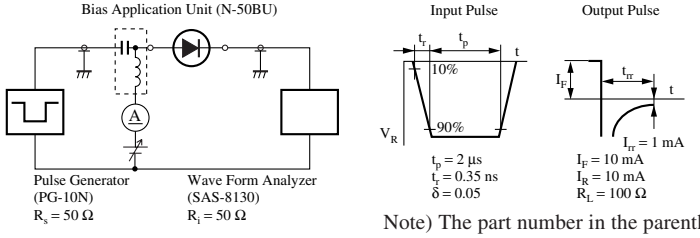
■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Reverse voltage	V_R	30	V
Maximum peak reverse voltage	V_{RM}	30	V
Forward current	I_F	30	mA
Peak forward current	I_{FM}	150	mA
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	−55 to +125	°C

■ Electrical Characteristics $T_a = 25°C \pm 3°C$

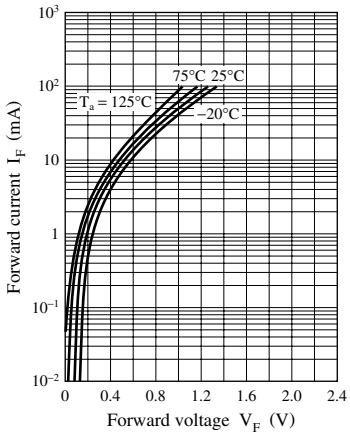
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	V_{F1}	I_F = 1 mA			0.3	V
	V_{F2}	I_F = 30 mA			1.0	
Reverse current	I_R	V_R = 30 V			30	µA
Terminal capacitance	C_t	V_R = 1 V, f = 1 MHz		1.5		pF
Reverse recovery time *	t_{rr}	$I_F = I_R$ = 10 mA I_{rr} = 1 mA, R_L = 100 Ω		1.0		ns
Detection efficiency	η	V_{IN} = 3 $V_{(peak)}$, f = 30 MHz R_L = 3.9 kΩ, C_L = 10 pF		65		%

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.
2. This product is sensitive to electric shock (static electricity, etc.). Due attention must be paid on the charge of a human body and the leakage of current from the operating equipment.
3. Absolute frequency of input and output is 2 GHz.
4. ∗: t_{rr} measurement circuit

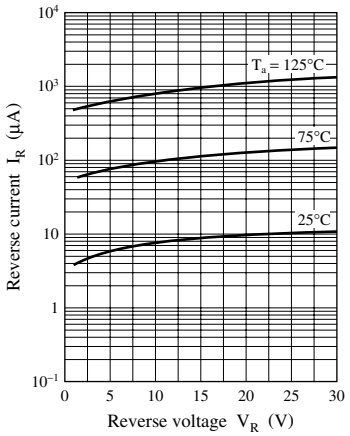


Note) The part number in the parenthesis shows conventional part number.

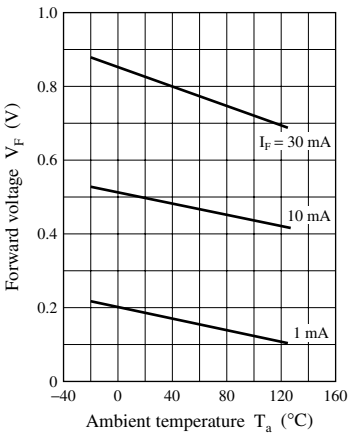
I_F — V_F



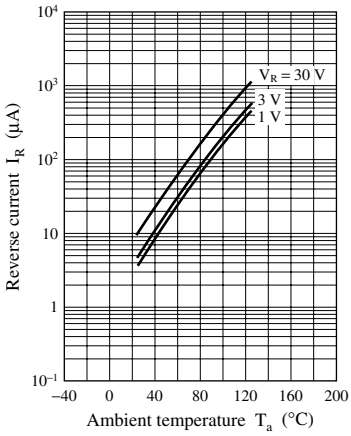
I_R — V_R



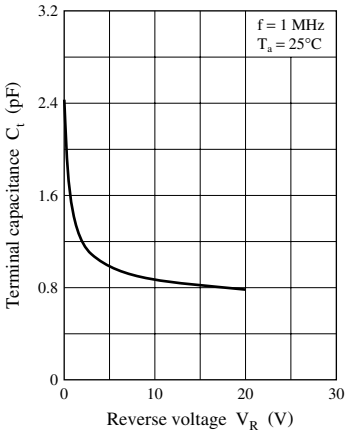
V_F — T_a



I_R — T_a



C_t — V_R



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