MA3X704 (MA704), MA3X704A (MA704A)

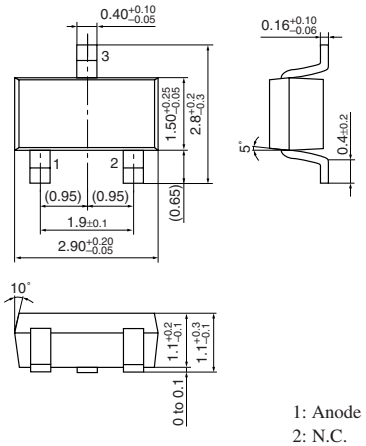
Silicon epitaxial planar type

For switching
For wave detection

■ Features

- Low forward voltage V_F and good wave detection efficiency η
- Small temperature coefficient of forward characteristic
- Small reverse current I_R

Unit: mm



1: Anode
2: N.C.
3: Cathode

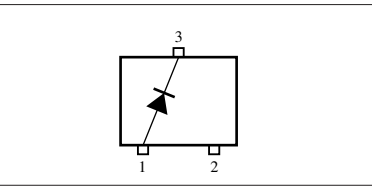
EIAJ: SC-59 Mini3-G1 Package

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter		Symbol	Rating	Unit
Reverse voltage	MA3X704	V_R	15	V
	MA3X704A		30	
Maximum peak reverse voltage	MA3X704	V_{RM}	15	V
	MA3X704A		30	
Peak forward current		I_{FM}	150	mA
Forward current		I_F	30	mA
Junction temperature		T_j	125	°C
Storage temperature		T_{stg}	−55 to +125	°C

Marking Symbol
- MA3X704: M1K
- MA3X704A: M1L

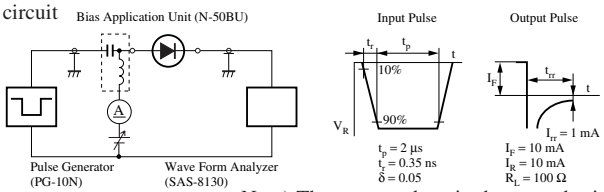
Internal Connection



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

Parameter		Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage		V_{F1}	I_F = 1 mA			0.4	V
		V_{F2}	I_F = 30 mA			1.0	
Reverse current	MA3X704	I_R	V_R = 15 V			200	nA
	MA3X704A		V_R = 30 V			300	
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		%

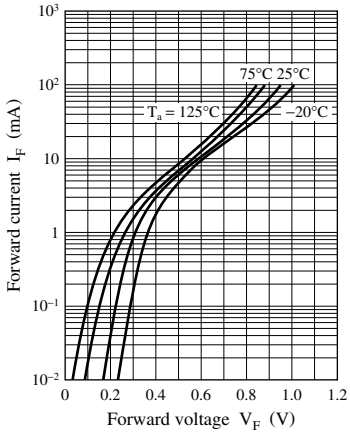
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.
2. This product is sensitive to electric shock (static electricity, etc.). Due attention must be paid on the charge of a human body and the leakage of current from the operating equipment.
3.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



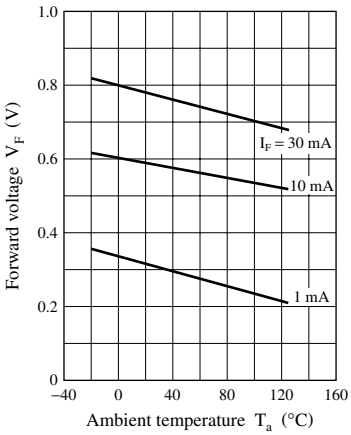
Note) The part numbers in the parenthesis show conventional part number.

Common characteristics charts

I_F — V_F

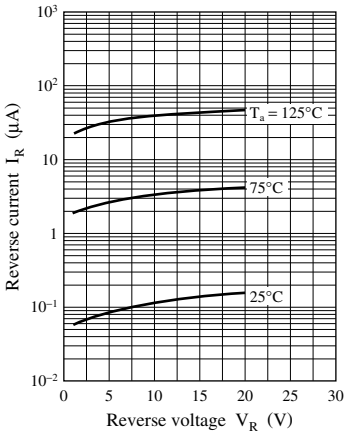


V_F — T_a

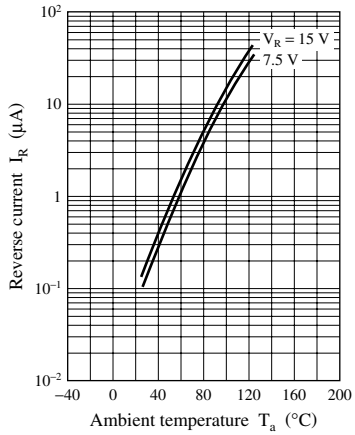


Characteristics charts of MA3X704

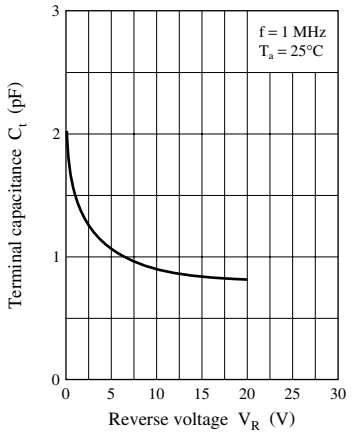
I_R — V_R



I_R — T_a

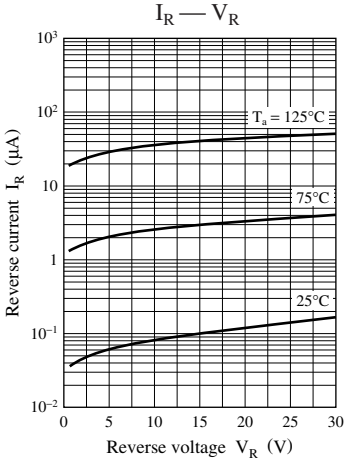


C_t — V_R

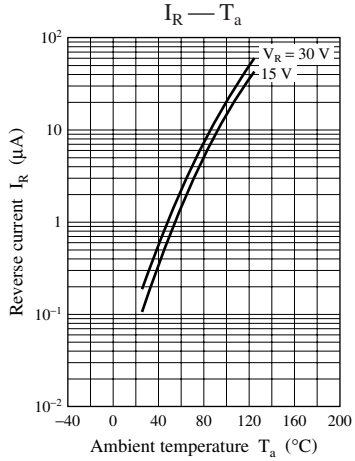


Characteristics charts of MA3X704A

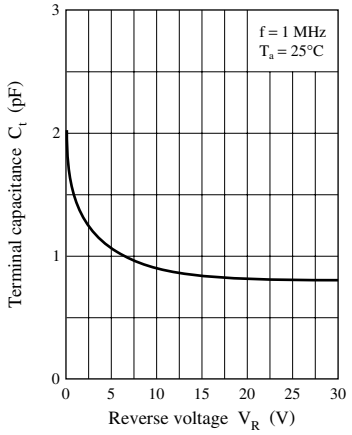
I_R — V_R



I_R — T_a



C_t — V_R



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