MA3X730

Silicon epitaxial planar type

For UHF mixer

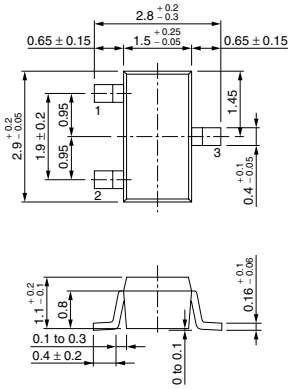
■ Features

- Two MA2X707s are contained in the (Mini (3-pin) type)
- Large conversion gain (GC)
- Small forward voltage V_F
- Optimum for the UHF band mixer

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Forward voltage (DC)	V_F	0.5	V
Reverse voltage (DC)	V_R	5	V
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	−55 to +125	°C

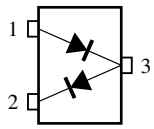
Unit : mm



1 : Anode 1
2 : Cathode 2
3 : Cathode 1 JEDEC : TO-236
Anode 2 EIAJ : SC-59
Mini Type Package (3-pin)

Marking Symbol: M2X

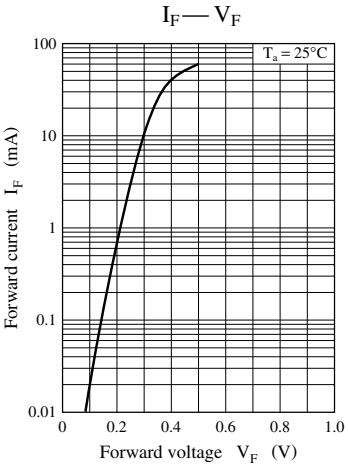
Internal Connection

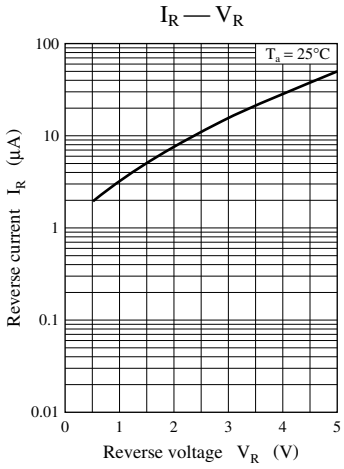


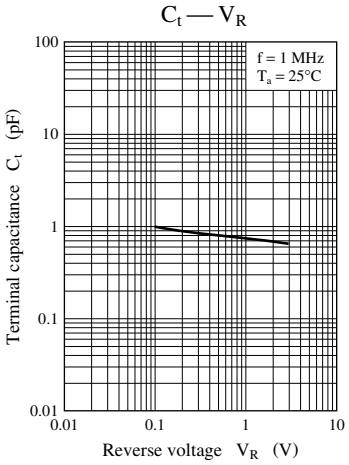
■ Electrical Characteristics $T_a = 25°C$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward current (DC)	I_F	$V_F = 0.5$ V	35		100	mA
Reverse current (DC)	I_R	$V_R = 5$ V			35	μA
Forward voltage (DC)	V_F	$I_F = 2$ mA		0.25		V
Reverse breakdown voltage (DC)	$V_{(BR)R}$	$I_R = 1$ mA	5			V
Terminal capacitance	C_t	$V_R = 0.5$ V, f = 1 MHz	0.65	0.85	1.05	pF
Conversion gain*1,2	GC	$R_F = 890$ MHz, $L_O = 935$ MHz $I_F = 45$ MHz	−7	−5		dB
Static breakdown strength		C = 100 pF, Breakdown judgment point $I_R \geq 35$ μA	100	200		V

Note) 1. Schottky barrier diode 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
2. Rated input/output frequency: 935 MHz
3. Noise index is 8.5 dB
4. Each characteristic is a standard for individual diodes
5. *1 : Judgement is to be made per each chip lot. Sampling of LTPD = 20% and n = 11 is guaranteed.
*2 : Set min. GC = −7 dB. Out-spec products, if any, this specification would be reviewed


I_F — V_F
T_a = 25°C
Forward current I_F (mA)
100
10
1
0.1
0.01
0
0.2
0.4
0.6
0.8
1.0
Forward voltage V_F (V)


I_R — V_R
T_a = 25°C
Reverse current I_R (μA)
100
10
1
0.1
0.01
0
1
2
3
4
5
Reverse voltage V_R (V)


C_t — V_R
f = 1 MHz
T_a = 25°C
Terminal capacitance C_t (pF)
100
10
1
0.1
0.01
0.01
0.1
1
10
Reverse voltage V_R (V)