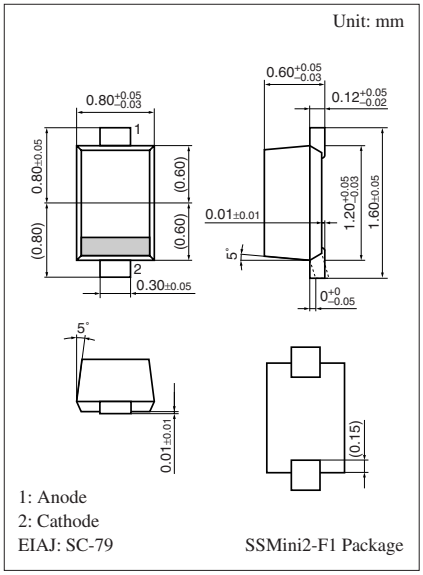
MA2SE01

Silicon epitaxial planar type

For mixer

■ Features

- High-frequency wave detection is possible
- Low forward voltage V_F
- Small terminal capacitance C_t
- SS-Mini type 2-pin package



Marking Symbol: 4L

■ Absolute Maximum Ratings $T_a = 25°C$

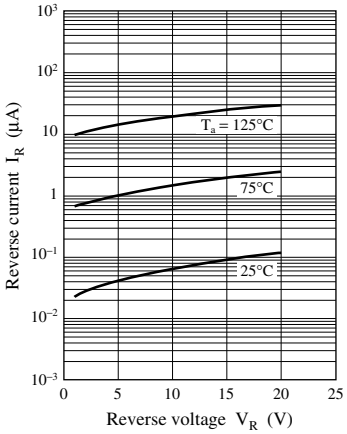
Parameter	Symbol	Rating	Unit
Reverse voltage	V_R	20	V
Maximum peak reverse voltage	V_{RM}	20	V
Forward current	I_F	35	mA
Peak forward current	I_{FM}	100	mA
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	−55 to +125	°C

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

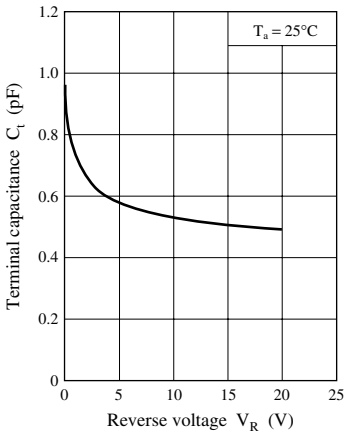
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	V_{F1}	$I_F = 1$ mA			0.41	V
	V_{F2}	$I_F = 35$ mA			1.0	V
Reverse current	I_R	$V_R = 15$ V			200	nA
Terminal capacitance	C_t	$V_R = 0$ V, f = 1 MHz			1.2	pF
Forward dynamic resistance	r_f	$I_F = 5$ mA		40		Ω

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. Rated input/output frequency: 2 GHz

I_R — V_R


Reverse current I_R (μA)
10^3
10^2
10
1
10^{-1}
10^{-2}
10^{-3}
T_a = 125°C
75°C
25°C
0
5
10
15
20
25
Reverse voltage V_R (V)

C_t — V_R


Terminal capacitance C_t (pF)
1.2
1.0
0.8
0.6
0.4
0.2
0
T_a = 25°C
0
5
10
15
20
25
Reverse voltage V_R (V)

Request for your special attention and precautions in using the technical information and semiconductors described in this book

(1) If any of the products or technical information described in this book is to be exported or provided to non-residents, the laws and regulations of the exporting country, especially, those with regard to security export control, must be observed.

(2) The technical information described in this book is intended only to show the main characteristics and application circuit examples of the products, and no license is granted under any intellectual property right or other right owned by our company or any other company. Therefore, no responsibility is assumed by our company as to the infringement upon any such right owned by any other company which may arise as a result of the use of technical information described in this book.

(3) The products described in this book are intended to be used for standard applications or general electronic equipment (such as office equipment, communications equipment, measuring instruments and household appliances).
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- Any applications other than the standard applications intended.

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(5) When designing your equipment, comply with the range of absolute maximum rating and the guaranteed operating conditions (operating power supply voltage and operating environment etc.). Especially, please be careful not to exceed the range of absolute maximum rating on the transient state, such as power-on, power-off and mode-switching. Otherwise, we will not be liable for any defect which may arise later in your equipment.
Even when the products are used within the guaranteed values, take into the consideration of incidence of break down and failure mode, possible to occur to semiconductor products. Measures on the systems such as redundant design, arresting the spread of fire or preventing glitch are recommended in order to prevent physical injury, fire, social damages, for example, by using the products.

(6) Comply with the instructions for use in order to prevent breakdown and characteristics change due to external factors (ESD, EOS, thermal stress and mechanical stress) at the time of handling, mounting or at customer's process. When using products for which damp-proof packing is required, satisfy the conditions, such as shelf life and the elapsed time since first opening the packages.