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# MA4SD05X

## Silicon epitaxial planar type

For high-speed switching circuits

### ■ Features

- Two isolated elements are contained in one package, allowing high-density mounting
- Optimum for high frequency rectification because of its short reverse recovery time  $t_{rr}$

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

Parameter	Symbol	Rating	Unit
Reverse voltage	$V_R$	45	V
Maximum peak reverse voltage	$V_{RM}$	45	V
Forward current *1	$I_F$	100	mA
Peak forward current *1	$I_{FM}$	300	mA
Non-repetitive peak forward surge current *1, 2	$I_{FSM}$	1	A
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$

Note) \*1: Value for single diode

\*2: 50 Hz sine wave 1 cycle (Non-repetitive peak current)

### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

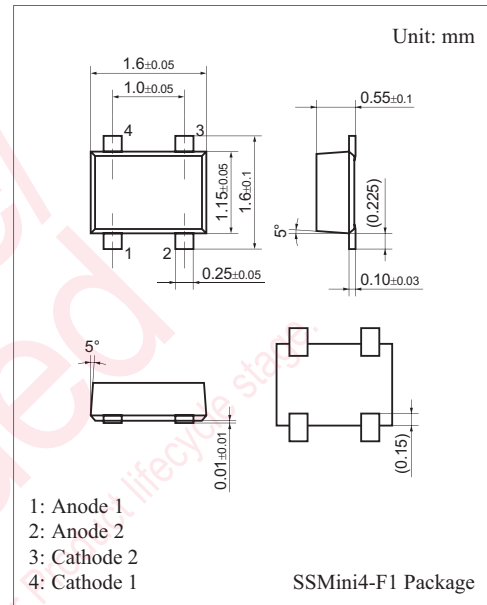
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	$V_{F1}$	$I_F = 1 \text{ mA}$		0.27		V
	$V_{F2}$	$I_F = 10 \text{ mA}$		0.35		
	$V_{F3}$	$I_F = 100 \text{ mA}$		0.54	0.60	
Reverse current	$I_R$	$V_R = 40 \text{ V}$			5	$\mu\text{A}$
Terminal capacitance	$C_t$	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$		12	18	pF
Reverse recovery time *	$t_{rr}$	$I_F = I_R = 100 \text{ mA}, I_{rr} = 10 \text{ mA}$ $R_L = 100 \Omega$		2.0		ns

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

2. Absolute frequency of input and output is 250 MHz

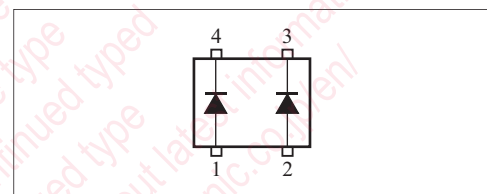
2. This product is sensitive to electric shock (static electricity, etc.). Due attention must be paid on the charge of a human body and the leakage of current from the operating equipment.

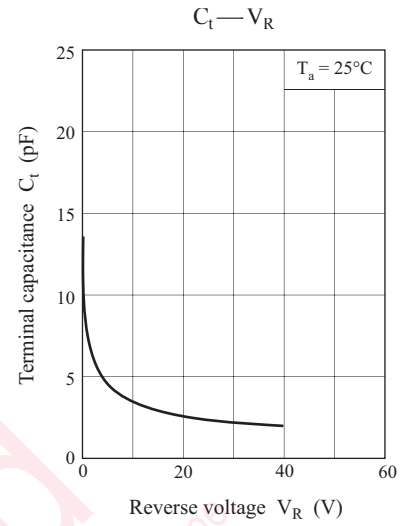
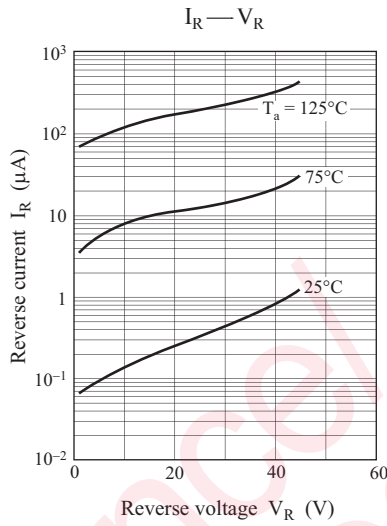
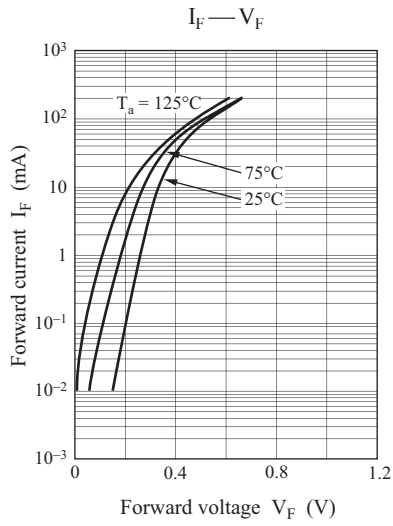
3. \*:  $t_{rr}$  measurement circuit



Marking Symbol: M5C

Internal Connection





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