

# MAS3795

## Silicon epitaxial planar type

For high-speed switching circuits

### ■ Features

- High-density mounting is possible
- Optimum for high frequency rectification because of its short reverse recovery time ( $t_{rr}$ )
- Low forward voltage  $V_F$  optimum for low voltage rectification  
 $V_F = < 0.3 \text{ V}$  (at  $I_F = 1 \text{ mA}$ )
- SSS-Mini type 3-pin package

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

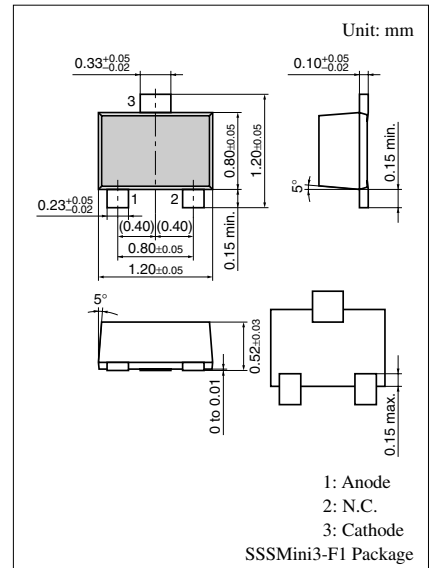
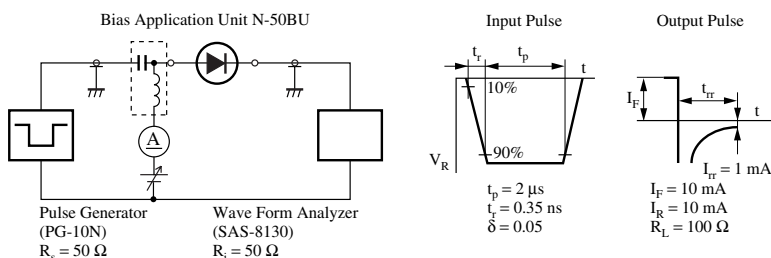
Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	$V_R$	30	V
Peak reverse voltage	$V_{RM}$	30	V
Forward current (DC)	$I_F$	30	mA
Peak forward current	$I_{FM}$	150	mA
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current (DC)	$I_R$	$V_R = 30 \text{ V}$			30	$\mu\text{A}$
Forward voltage (DC)	$V_{F1}$	$I_F = 1 \text{ mA}$			0.3	V
	$V_{F2}$	$I_F = 30 \text{ mA}$			1.0	
Terminal capacitance	$C_t$	$V_R = 1 \text{ V}, f = 1 \text{ MHz}$		1.5		pF
Reverse recovery time *	$t_{rr}$	$I_F = I_R = 10 \text{ mA}$ $I_{rr} = 1 \text{ mA}, R_L = 100 \Omega$		1.0		ns
Detection efficiency	$\eta$	$V_{in} = 3 \text{ V}_{(peak)}, f = 30 \text{ MHz}$ $R_L = 3.9 \text{ k}\Omega, C_L = 10 \text{ pF}$		65		%

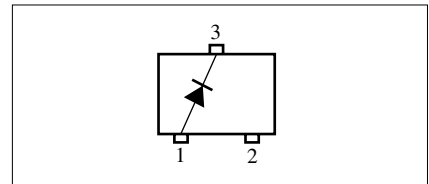
Note) 1. This product is sensitive to electric shock (static electricity, etc.). Due attention must be paid on the charge of a human body and the leakage of current from the operating equipment.

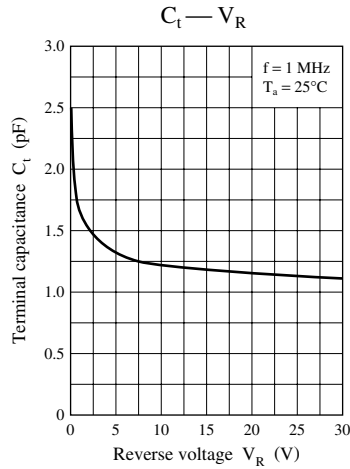
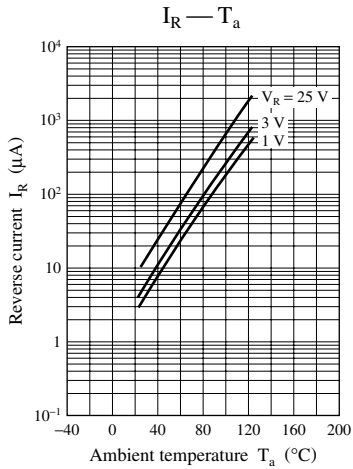
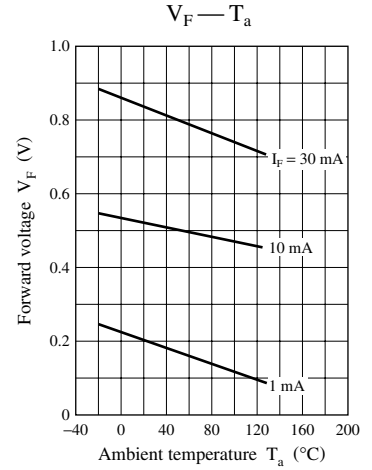
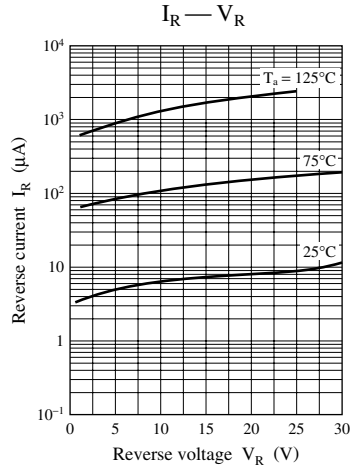
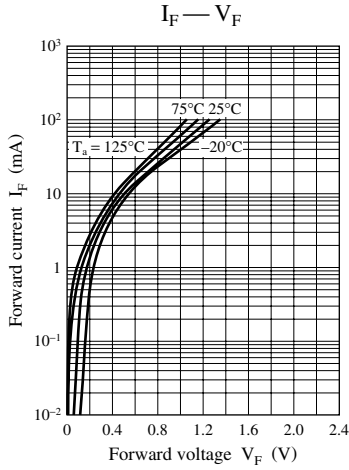
2. Rated input/output frequency: 2 GHz    3. \*:  $t_{rr}$  measuring instrument



Marking Symbol: M2

Internal Connection





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

- (1) An export permit needs to be obtained from the competent authorities of the Japanese Government if any of the products or technologies described in this book and controlled under the "Foreign Exchange and Foreign Trade Law" is to be exported or taken out of Japan.
- (2) The technical information described in this book is limited to showing representative characteristics and applied circuits examples of the products. It neither warrants non-infringement of intellectual property right or any other rights owned by our company or a third party, nor grants any license.
- (3) We are not liable for the infringement of rights owned by a third party arising out of the use of the product or technologies as described in this book.
- (4) 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).  
Consult our sales staff in advance for information on the following applications:
  - Special applications (such as for airplanes, aerospace, automobiles, traffic control equipment, combustion equipment, life support systems and safety devices) in which exceptional quality and reliability are required, or if the failure or malfunction of the products may directly jeopardize life or harm the human body.
  - Any applications other than the standard applications intended.
- (5) The products and product specifications described in this book are subject to change without notice for modification and/or improvement. At the final stage of your design, purchasing, or use of the products, therefore, ask for the most up-to-date Product Standards in advance to make sure that the latest specifications satisfy your requirements.
- (6) When designing your equipment, comply with the guaranteed values, in particular those of maximum rating, the range of operating power supply voltage, and heat radiation characteristics. 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.
- (7) When using products for which damp-proof packing is required, observe the conditions (including shelf life and amount of time let standing of unsealed items) agreed upon when specification sheets are individually exchanged.
- (8) This book may be not reprinted or reproduced whether wholly or partially, without the prior written permission of Matsushita Electric Industrial Co., Ltd.