MA3S7810G

Silicon epitaxial planar type

For high speed switching
For wave detection

■ Features

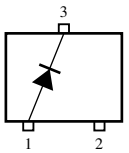
- High-density mounting is possible
- Optimum for high frequency rectification because of its short reverse recovery time t_{rr}
- Low forward voltage V_F and good rectification efficiency

■ Package

- Code
  SSMini3-F3
- Pin Name
  1: Anode
  2: N.C.
  3: Cathode

■ Marking Symbol: M1L

■ Internal Connection



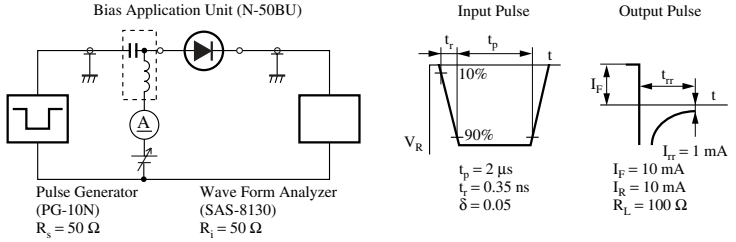
■ Absolute Maximum Ratings $T_a = 25°C$

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

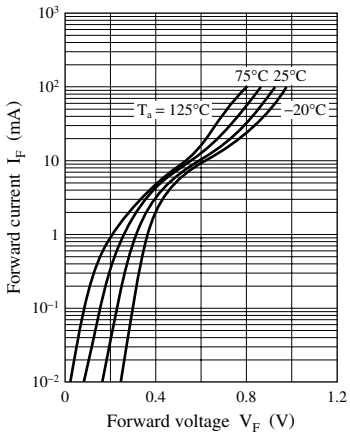
■ Electrical Characteristics $T_a = 25°C \pm 3°C$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	V_{F1}	$I_F = 1$ mA			0.4	V
	V_{F2}	$I_F = 30$ mA			1.0	
Reverse current	I_R	$V_R = 30$ V			300	nA
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, $R_L = 100\ \Omega$		1.0		ns
Detection efficiency	η	$V_{IN} = 3\ V_{(peak)}$, f = 30 MHz $R_L = 3.9$ kΩ, $C_L = 10$ pF		65		%

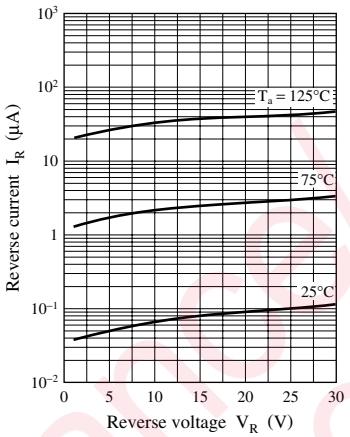
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.
2. This product is sensitive to electric shock (static electricity, etc.). Due attention must be paid on the charge of a human body and the leakage of current from the operating equipment.
3.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



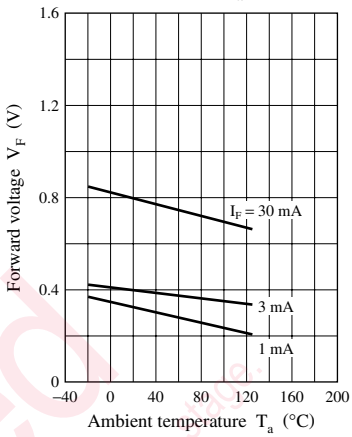
I_F — V_F



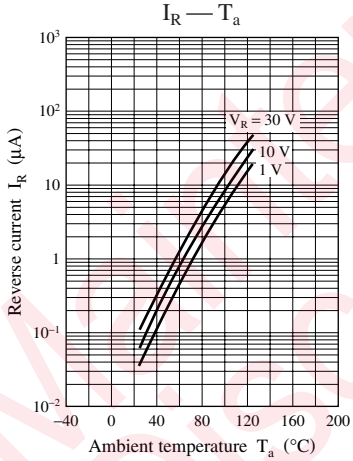
I_R — V_R



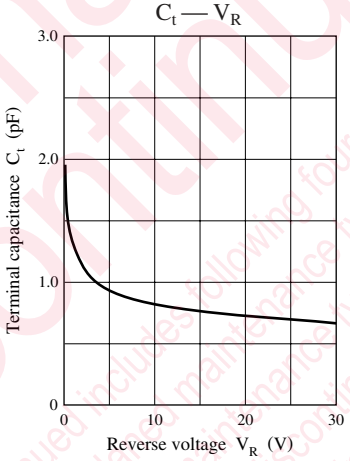
V_F — T_a



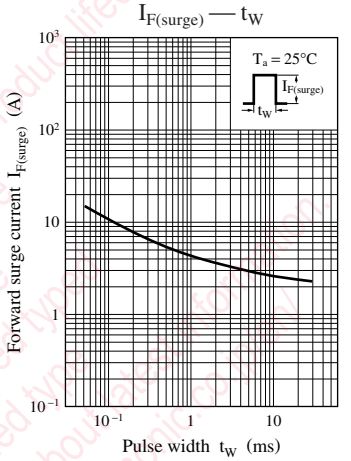
I_R — T_a



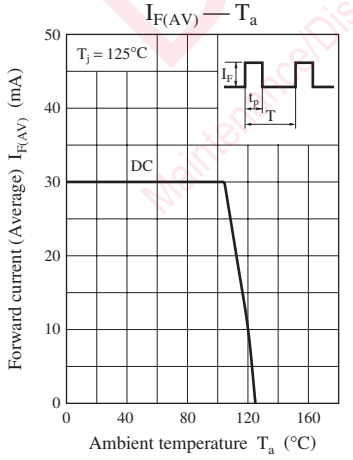
C_t — V_R



$I_{F(surge)}$ — t_W

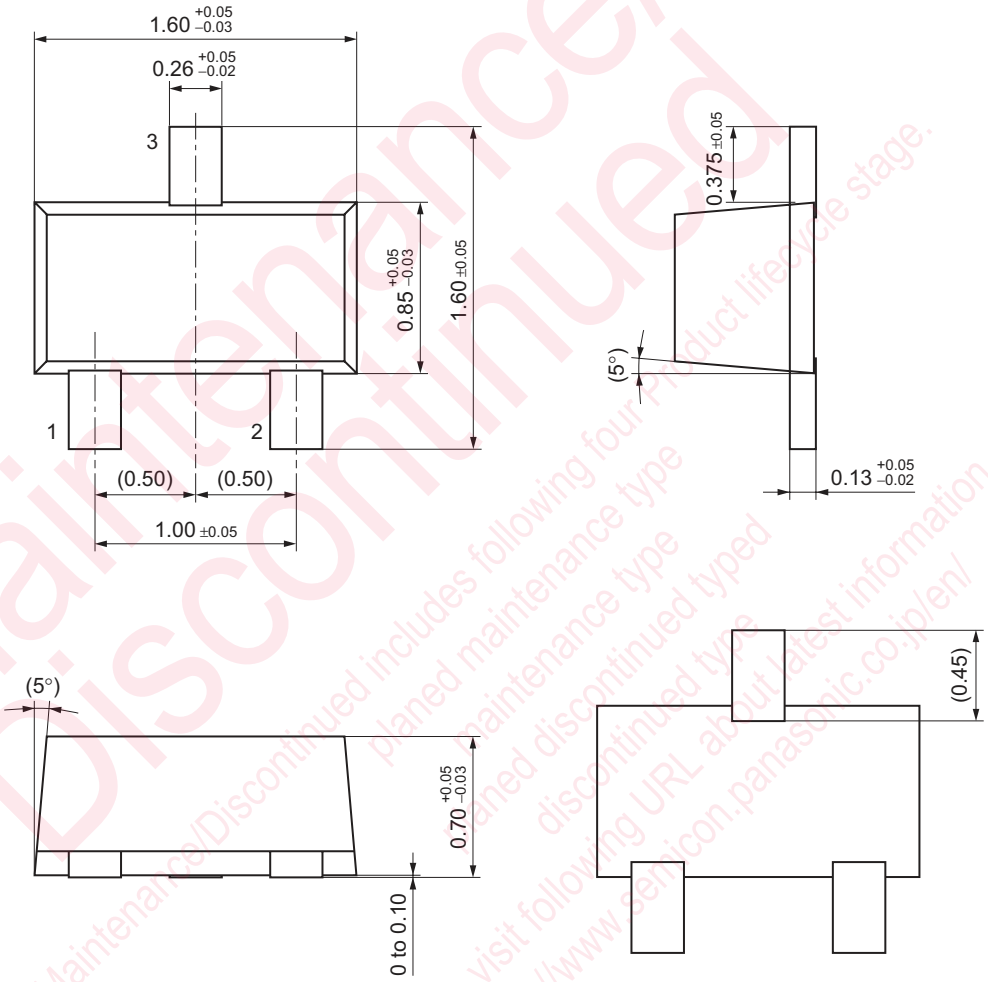


$I_{F(AV)}$ — T_a



SSMini3-F3

Unit: mm



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