MA24D58

Silicon epitaxial planar type

For high-frequency rectification in switching power supplies
For prevention of reverse current from batteries in mobile devices

■ Overview

MA24D58 is optimal for on-board power supplies and power supplies in mobile application.

■ Features

- Forward current (Average) $I_{F(AV)}$ = 3.0 A rectification is possible
- Small reverse current I_R
- Panasonic's unique wireless bonding structure assures a highsurge resistance (I_{FSM} = 50 A).

■ Package

- Code
  TMiniP2-F1
- Pin Name
  1: Anode
  2: Cathode

■ Marking Symbol: 6T

■ Absolute Maximum Ratings T_a = 25°C

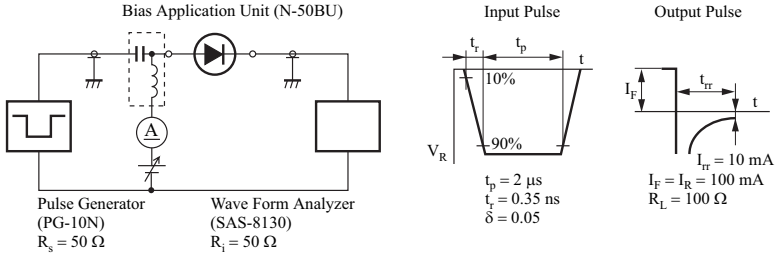
Parameter	Symbol	Rating	Unit
Reverse voltage	V_R	60	V
Maximum peak reverse voltage	V_{RM}	60	V
Forward current *1	I_F	3.0	A
Non-repetitive peak forward surge current *2	I_{FSM}	50	A
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	–40 to +150	°C

Note) *1: Mounted on an alumina PC board (board: 20 mm × 50 mm × 0.8 t, soldering land: 2.0 mm × 2.0 mm + 20 mm × 0.8 mm)
*2: 50 Hz sine wave 1 cycle (Non-repetitive peak current)

■ Electrical Characteristics T_a = 25°C±3°C

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward current	V_F	I_F = 3.0 A		0.5	0.6	V
Reverse current	I_R	V_R = 60 V		11	150	μA
Terminal capacitance *4	C_t	V_R = 10 V, f = 1 MHz		440		pF
Reverse recovery time *1, 4	t_{rr}	I_F = I_R = 100 mA, I_{rr} = 10 mA, R_L = 100 Ω		31		ns
Thermal resistance	$R_{th(j-a)}$ *2, 4	Mounted on an alumina PC board		55		°C/W
	$R_{th(j-a)}$ *3, 4	Mounted on a glass epoxy PC board		110		

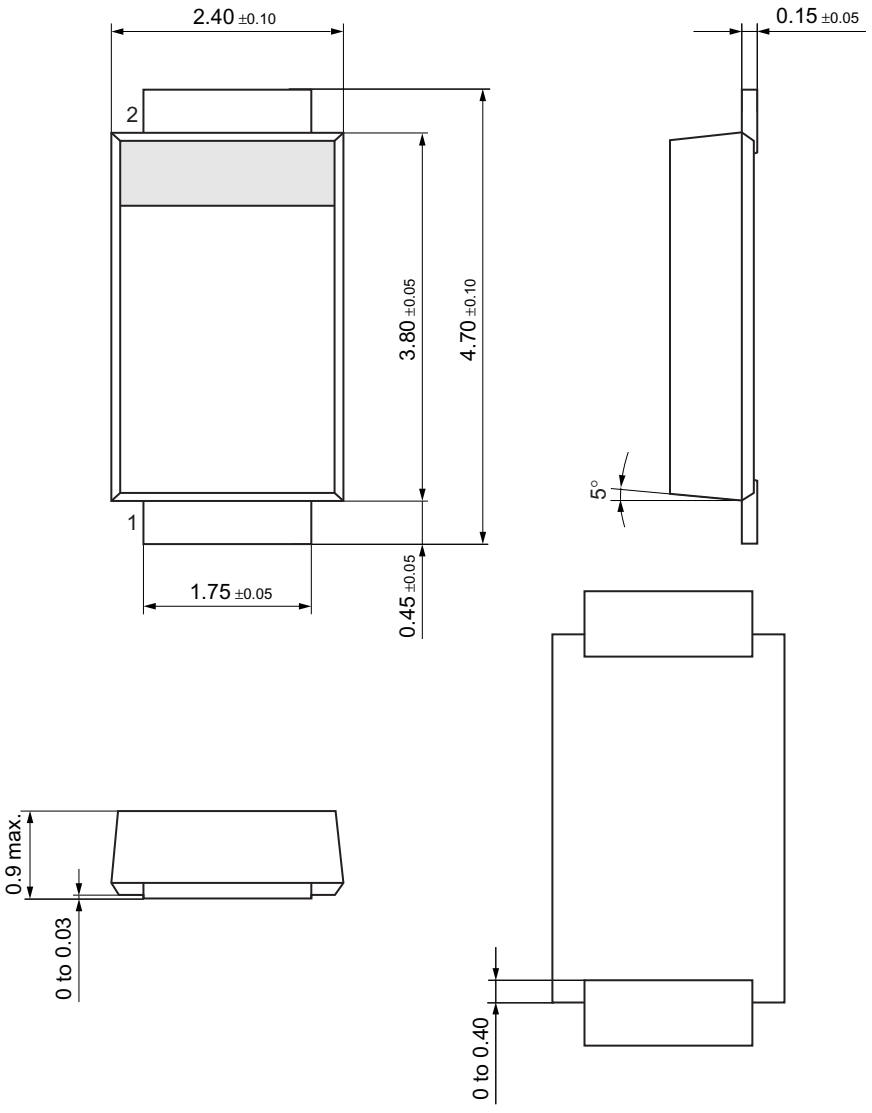
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.
2. This product is sensitive to electric shock (static electricity, etc.). Due attention must be paid on the charge of a human body and the leakage of current from the operating equipment.
3.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



*2: Mounted on an alumina PC board (board: 20 mm × 50 mm × 0.8 t, soldering land: 2.0 mm × 2.0 mm + 20 mm × 0.8 mm)
*3: Mounted on a glass epoxy PC board (board: 20 mm × 50 mm × 1.0 t, soldering land: 2.0 mm × 2.0 mm + 20 mm × 0.8 mm)
*4: Design guaranteed

TMiniP2-F1

Unit: mm



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