

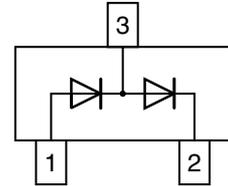
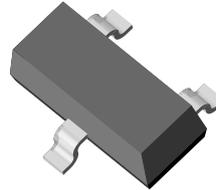
Small Signal Switching Diode, Dual

Description

Silicon Epitaxial Planar Diode
Fast switching dual diode, especially suited for automatic insertion

Features

- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



18109

Mechanical Data

Case: SOT-23 Plastic case

Weight: approx. 8.8 mg

Packaging Codes/Options:

GS18 / 10 k per 13" reel (8 mm tape), 10 k/box

GS08 / 3 k per 7" reel (8 mm tape), 15 k/box

Parts Table

Part	Ordering code	Marking	Remarks
MMBD7000-V	MMBD7000-V-GS18 or MMBD7000-V-GS08	M5C	Tape and Reel

Absolute Maximum Ratings

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Reverse voltage		V_R	100	V
Forward current (continuous)		I_F	200	mA
Non-repetitive peak forward current	$t = 1\text{ s}$	I_{FSM}	500	mA
Power dissipation on FR-5 board	$T_A = 25\text{ }^{\circ}\text{C}$	P_{tot}	225	mW
	Derate above 25 °C	P_{tot}	1.8	mW/°C
Total device dissipation on Alumina substrate	$T_A = 25\text{ }^{\circ}\text{C}$	P_{tot}	300	mW
	Derate above 25 °C	P_{tot}	2.4	mW/°C

Thermal Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Typical thermal resistance		R _{thJA}	417 ¹⁾	°C/W
Junction to ambient air		R _{thJA}	556 ²⁾	mW/°W
Maximum junction temperature		T _j	150	°C
Storage temperature range		T _S	- 55 to + 150	°C

¹⁾ Device on alumina substrate

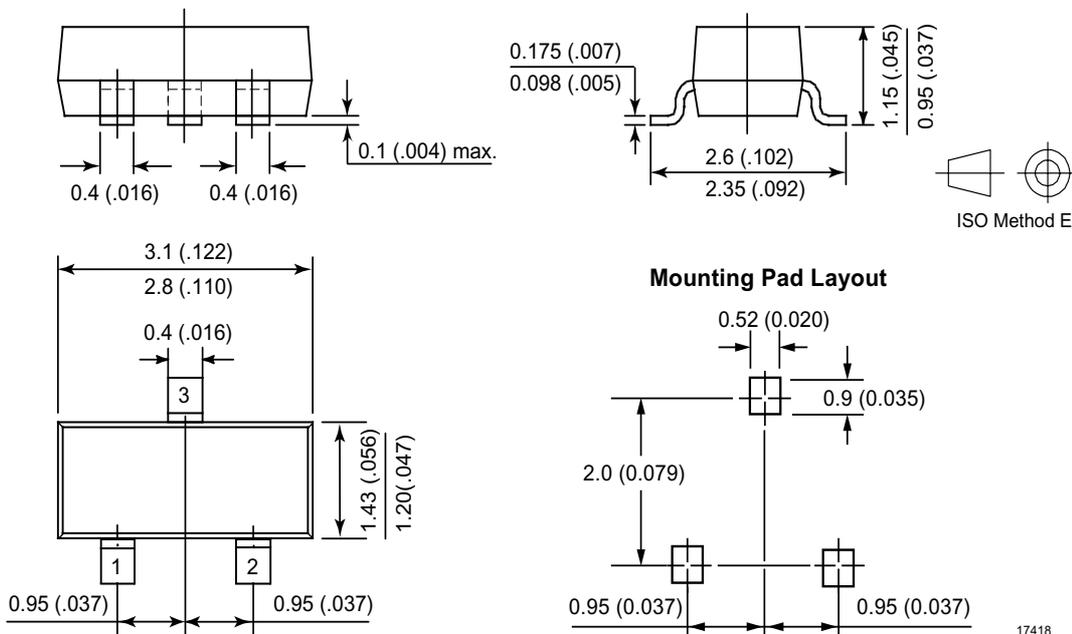
²⁾ On FR-5 board

Electrical Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Reverse breakdown voltage	I _R = 100 μA	V _{BR}	100			V
Leakage current	V _R = 50 V	I _R			1.0	μA
	V _R = 100 V	I _R			3.0	μA
	V _R = 50 V, T _j = 125 °C	I _R			100	μA
Forward voltage	I _F = 1 mA	V _F	0.55		0.70	V
	I _F = 10 mA	V _F	0.67		0.82	V
	I _F = 100 mA	V _F	0.75		1.10	V
Diode capacitance	V _R = 0, f = 1 MHz	C _{tot}			1.5	pF
Reverse recovery time	I _F = 10 mA to I _R = 10 mA, I _{rr} = 1 mA, R _L = 100 Ω	I _{rr}			4.0	ns

Package Dimensions in mm (Inches)



17418