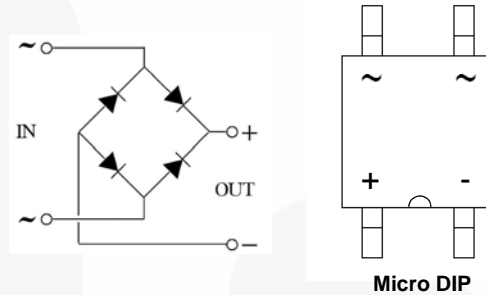


MDB10SS

1A, MicroDIP, Single-Phase Bridge Rectifiers

Features

- Low Package Profile: 1.45 mm (max)
- Requires Only 35 mm² of Board Space
- High Surge Current Capability: 30A (max)
- Glass Passivated Junction Rectifiers
- Smaller Plastic Body vs MDB10S
- Green Compound
- UL Certification : E352360



Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{RRM}	Maximum Repetitive Peak Reverse Voltage	1000	V
V_{RMS}	Maximum RMS Voltage	700	V
V_{DC}	Maximum DC Blocking Voltage	1000	V
$I_{F(AV)}$	Average Rectified Forward Current *	1.0	A
I_{FSM}	Peak Forward Surge Current **	30	A
I^2t	I^2t Rating for fusing ($t < 8.3\text{ms}$)	3.735	A ² S
T_J	Operating Junction Temperature Range	-55 to +150	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

* 60Hz sine wave, R-load, $T_A = 25^\circ\text{C}$ on FR-4 PCB.

** 60Hz sine wave, Non-repetitive 1 cycle peak value, $T_J = 25^\circ\text{C}$.

Thermal Characteristics*

Symbol	Parameter	Typ.	Units
$R_{\theta JA}$	Thermal Resistance, Junction-Ambient		
	- Measurement with Dual Dice - Measurement with Single Die	250 150	°C/W °C/W
ψ_{JL}	Thermal Characterization, Junction to Lead		
	- Measured at Anode pin - Measured at Cathode pin	57 15	°C/W °C/W

* Device mounted on FR-4 PCB with board size = 76.2mm x 114.3mm (JESD51-3 standards)

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Test condition	Value	Units
V_F	Maximum Forward Voltage	$I_F = 1\text{A}$, Pulse measurement, Per diode	1.1	V
I_R	Maximum Reverse Current	@ V_{RRM} , Pulse measurement, Per diode	10	μA
C_J	Typical Junction Capacitance	$V_R = 4\text{V}$, $f = 1\text{MHz}$	10	pF

Typical Performance Characteristics

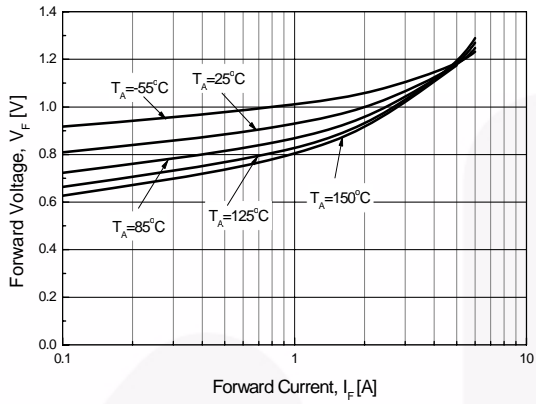


Figure 1. Forward Voltage vs Forward Current (Per diode)

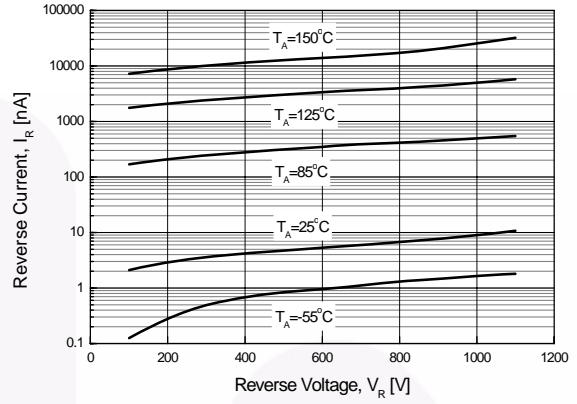


Figure 2. Reverse Current vs Reverse Voltage (Per diode)

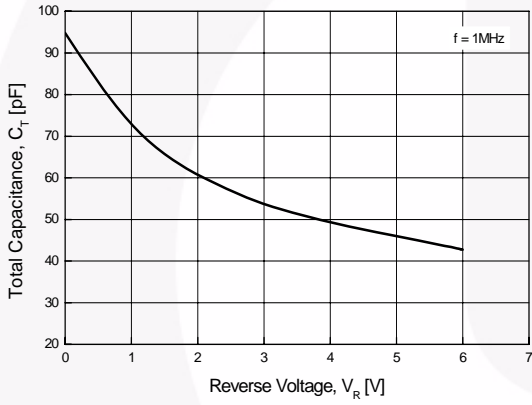
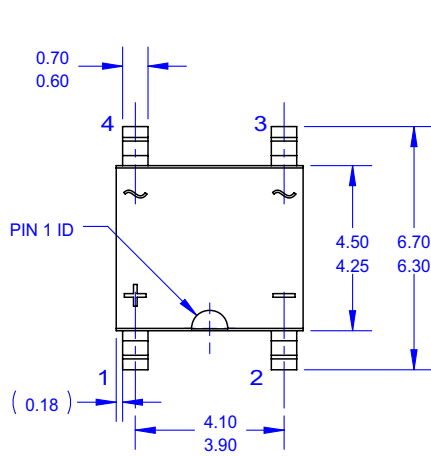
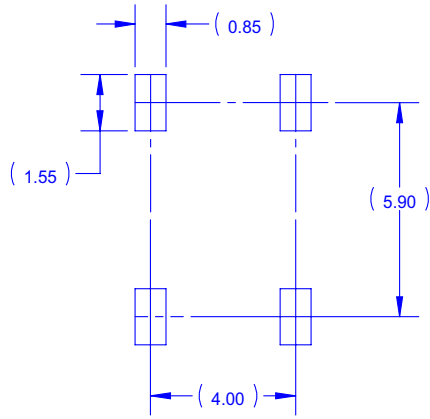


Figure 3. Total Capacitance

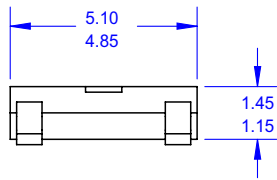
Physical Dimensions



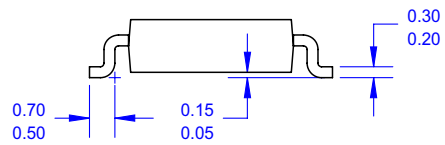
TOP VIEW



LAND PATTERN RECOMMENDATION



SIDE VIEW



END VIEW

NOTES:





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- B. ALL DIMENSIONS ARE IN MILLIMETERS.
- C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.
- G. DRAWING FILE NAME: MKT-TDI04BREV1.

Dimensions in Millimeters



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Rev. I61