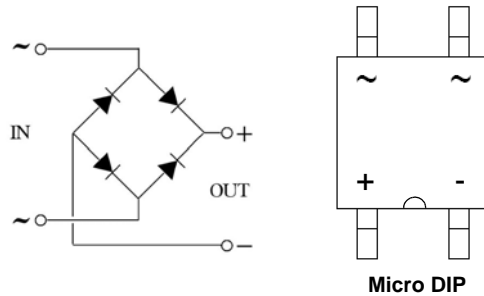


MDB6S / MDB8S / MDB10S

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
- UL Certification : E352360



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

Symbol	Parameter	Value			Units
		MDB6S	MDB8S	MDB10S	
V_{RRM}	Maximum Repetitive Peak Reverse Voltage	600	800	1000	V
V_{RMS}	Maximum RMS Voltage	420	560	700	V
V_{DC}	Maximum DC Blocking Voltage	600	800	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	250	°C/W
	- Measurement with Single Die	150	°C/W
ψ_{JL}	Thermal Characterization, Junction to Lead		
	- Measured at Anode pin	57	°C/W
	- Measured at Cathode pin	15	°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

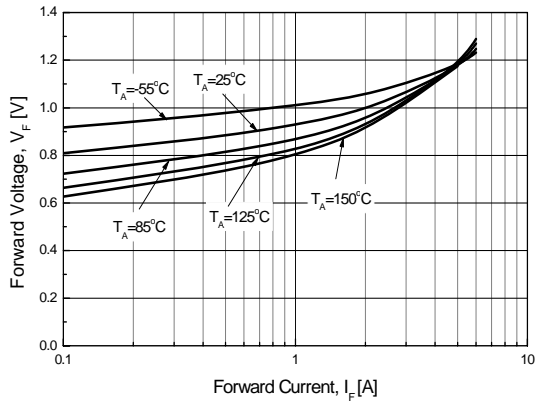


Figure 1. Forward Voltage vs Forward Current (Per diode)

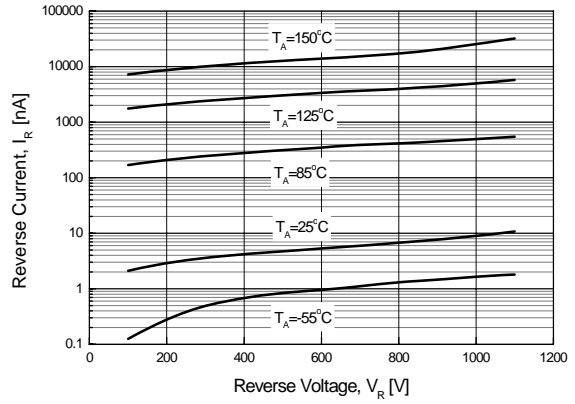


Figure 2. Reverse Current vs Reverse Voltage (Per diode)

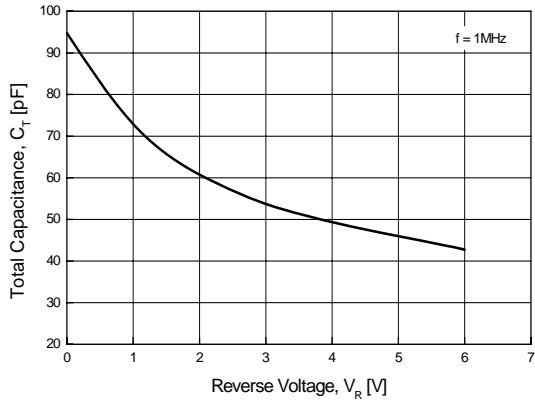






Figure 3. Total Capacitance



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