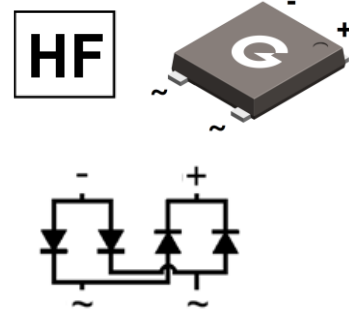


Silicon Bridge Rectifiers

TDF20K - TDF20M

Features

- Glass passivated junction
- High surge current capability
- Saves space on printed circuit boards
- High soldering temperature guaranteed: 260°C @ 10s
- RoHS compliant with Halogen-free



Mechanical Data

- Low profile saves space on printed circuit boards
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: As marked on body

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	TDF20K	TDF20M	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	800	1000	V
RMS Reverse Voltage	V _{RMS}	560	700	V
DC Blocking Voltage	V _{DC}	800	1000	V
Average Forward Output Current	I _{F_AV}	2.0		A
Peak Forward Surge Current, 8.3ms Single Half-Sine-wave	I _{FSM}	60		A
@ T _A = 25°C				
I ² t Rating for fusing	I ² t	14.9		A ² s

Thermal Characteristics

Parameter	Symbol	TDF20K	TDF20M	Unit
Typical Thermal Resistance *1	R _{θJA}	50		°C/W
	R _{θJC}	10		
Operating Junction Temperature Range	T _J	-55 ~ +150		°C
Storage Temperature Range	T _{STG}	-55 ~ +150		°C

Note *1: Device mounted on PCB with 10 mm x 20 mm x 0.1mm copper pad areas

Silicon Bridge Rectifiers

TDF20K - TDF20M

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

Parameter	Symbol	Test Condition		Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R = 2\mu\text{A}$, TDF20K		800	-	-	V
		$I_R = 2\mu\text{A}$, TDF20M		1000	-	-	V
Maximum Instantaneous Forward Voltage	V_F	$I_F = 2.0\text{A}$ Per Diode		-	-	1.1	V
Maximum Reverse Current	I_R	Rated V_R	@ $T_A = 25^\circ\text{C}$	-	-	5	μA
			@ $T_A = 125^\circ\text{C}$	-	-	200	

Silicon Bridge Rectifiers

TDF20K - TDF20M

Ratings and Characteristic Curves (@ $T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

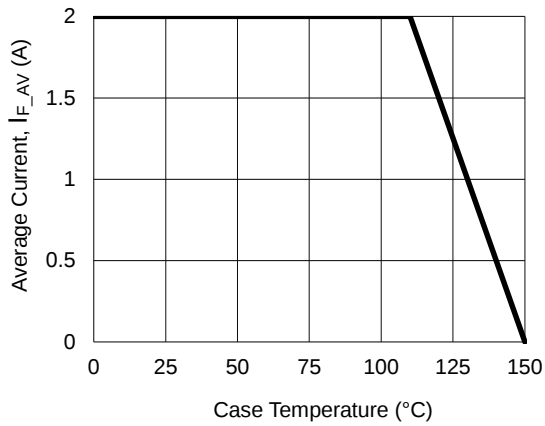


Fig.2 Surge Current Derating Curve

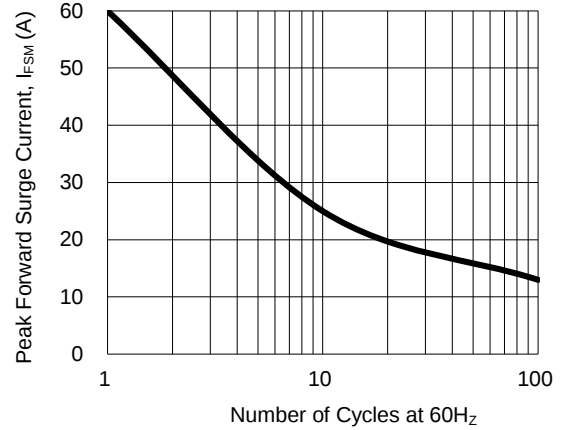


Fig.3 Typical Forward Voltage Characteristics

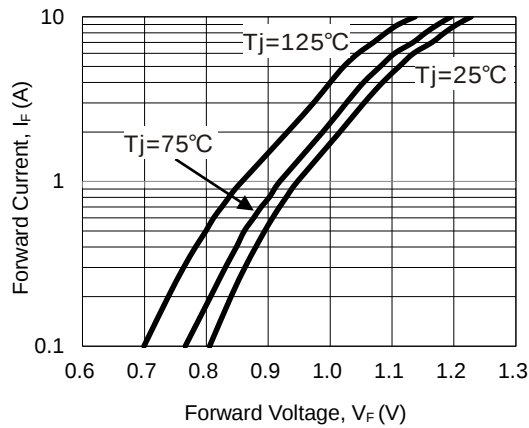
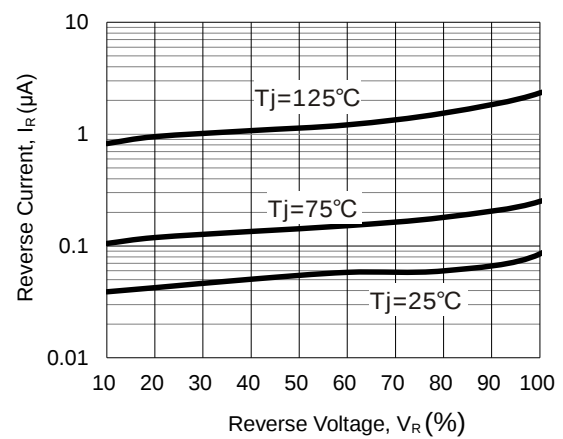


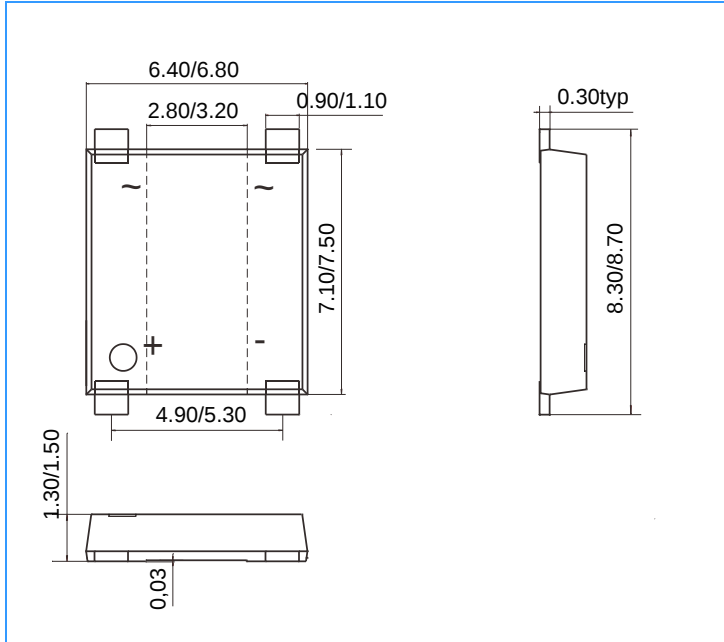
Fig.4 Typical Reverse Characteristics



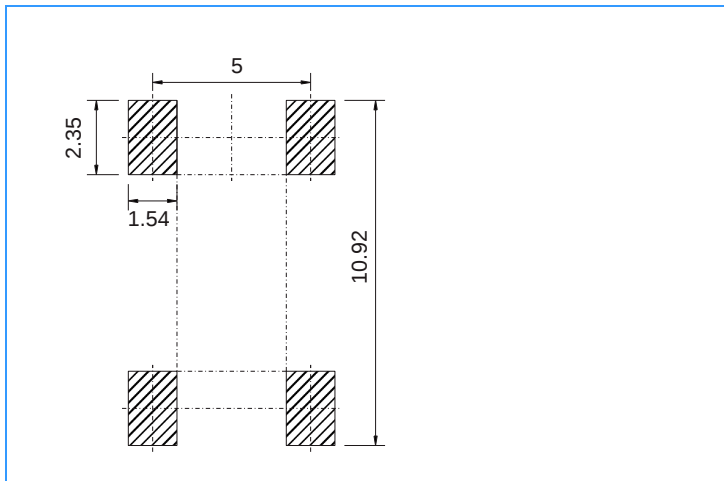
Silicon Bridge Rectifiers

TDF20K - TDF20M

Package Outline Dimensions (unit: mm)



Mounting Pad Layout (unit: mm)



Ordering Information

Part Number	Marking	Package	Shipping Quantity
TDF20K	TDF20K	TDF	3000 pcs / Tape & Reel
TDF20M	TDF20M	TDF	3000 pcs / Tape & Reel