



SEMiX® 13

Bridge Rectifier Module (uncontrolled) SEMiX501D17Fs

Features

- Terminal height 17 mm
- Chips soldered directly to isolated substrate
- UL recognised file no. E63532

Typical Applications*

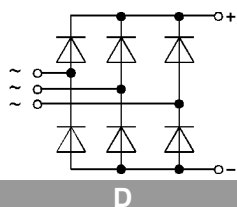
- Fast Input Bridge Rectifier for AC/DC motor control
- Power supply
- High frequency applications

Absolute Maximum Ratings

Symbol	Conditions		Values	Unit
Rect. Diode				
I _D	T _j = 150 °C	T _c = 85 °C	494	A
	sinus 180°	T _c = 100 °C	417	A
I _{FSM}	10 ms	T _j = 25 °C	2740	A
		T _j = 150 °C	2140	A
i ² t	10 ms	T _j = 25 °C	37538	A ² s
		T _j = 150 °C	22898	A ² s
V _{RSM}			1700	V
V _{RRM}			1700	V
T _j			-40 ... 150	°C
Module				
T _{stg}			-40 ... 125	°C
V _{isol}	AC sinus 50Hz	1 min	4000	V
		1 s	4800	V

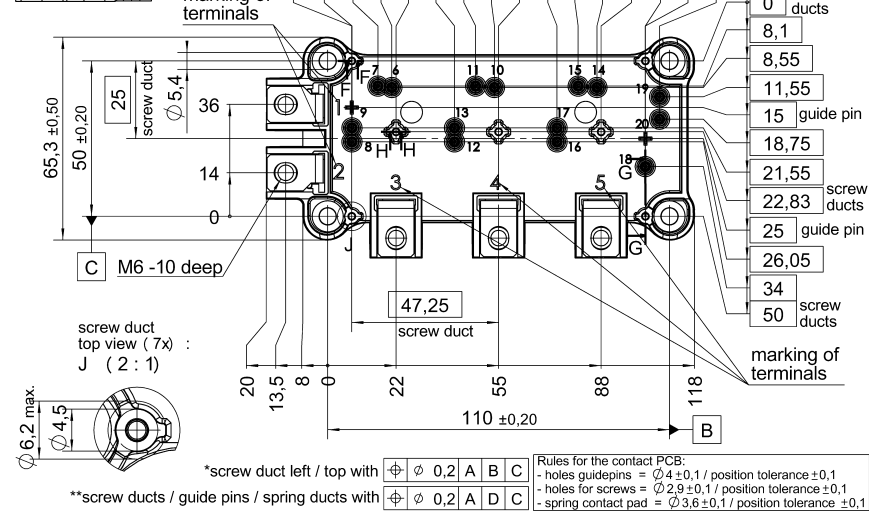
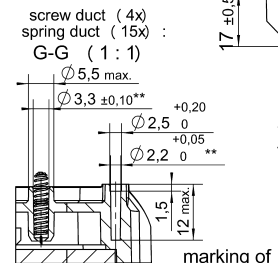
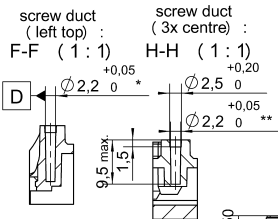
Characteristics

Symbol	Conditions		min.	typ.	max.	Unit
Rectifier Diode						
V _F	T _J = 25 °C, I _F = 300 A, chiplevel				1.90	V
V _(TO)	T _J = 125 °C, chiplevel				1.1	V
r _T	T _J = 125 °C, chiplevel				2.7	mΩ
I _{RD}	T _J = 125 °C, V _{RD} = V _{RRM}				14.4	mA
R _{th(j-c)}	sin. 180	per diode			0.165	K/W
						K/W
Module						
R _{CC'+EE'}	res., terminal-chip	T _C = 25 °C		0.7		mΩ
		T _C = 125 °C		1		mΩ
R _{th(c-s)}	per chip					K/W
	per module			0.04		K/W
M _s	to heat sink (M5)		3		5	Nm
M _t	to terminals (M6)		2.5		5	Nm
a					5 * 9,81	m/s ²
w				350		g
Temperature Sensor						
R ₁₀₀	T _C =100°C (R ₂₅ =5 kΩ)			493 ± 5%		Ω
B _{100/125}	R _(T) =R ₁₀₀ exp[B _{100/125} (1/T-1/T ₁₀₀)]; T[K];			3550 ±2%		K



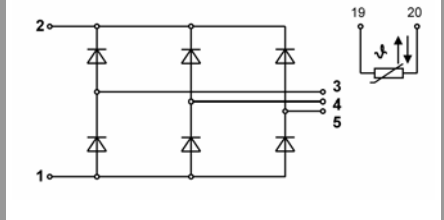
SEMiX501D17Fs

Case: SEMiX 13



SEMiX 13

general tolerance:
ISO 2768-mK
ISO 8015



spring configuration

This is an electrostatic discharge sensitive device (ESDS), international standard IEC 60747-1, Chapter IX

* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our staff.