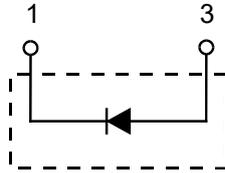
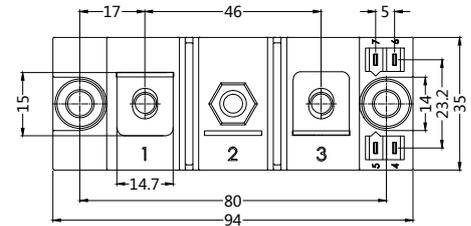
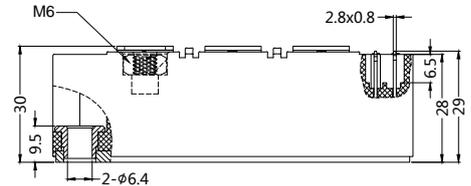


SDF120-17B

Soft Recovery Behaviour Ultra Fast Recovery Diode Modules



Dimensions in mm (1mm=0.0394")



	V_{RSM} V	V_{RRM} V
SDF120-17B	1700	1700

Symbol	Test Conditions	Maximum Ratings	Unit
I_{FRMS}	$T_C=82^\circ\text{C}$	188	A
I_{FAVM}	$T_C=82^\circ\text{C}$; rectangular, $d=0.5$	120	
I_{FRM}	$t_p < 10\mu\text{s}$; rep. rating, pulse width limited by T_{VJM}	360	
I_{FSM}	$T_{VJ}=45^\circ\text{C}$	$t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	A
	$T_{VJ}=150^\circ\text{C}$	$t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	
I^2t	$T_{VJ}=45^\circ\text{C}$	$t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	A ² s
	$T_{VJ}=150^\circ\text{C}$	$t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	
T_{VJ}		-40...+150	°C
T_{stg}		-40...+125	
T_{Smax}		110	
P_{tot}	$T_C=25^\circ\text{C}$	450	W
V_{ISOL}	50/60Hz, RMS $t=1\text{min}$	3000	V~
	$I_{ISOL} \leq 1\text{mA}$ $t=1\text{s}$	3600	
M_d	Mounting torque (M6)	2.25-2.75/20-25	Nm/lb.in.
	Terminal connection torque (M6)	4.50-5.50/40-48	
d_s	Creeping distance on surface	12.7	mm
d_A	Strike distance through air	9.6	mm
a	Maximum allowable acceleration	50	m/s ²
Weight		170	g

SDF120-17B

Soft Recovery Behaviour Ultra Fast Recovery Diode Modules

Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I_R	$T_{VJ}=25^{\circ}\text{C}; V_R=V_{RRM}$ $T_{VJ}=25^{\circ}\text{C}; V_R=0.8 \cdot V_{RRM}$ $T_{VJ}=125^{\circ}\text{C}; V_R=0.8 \cdot V_{RRM}$		15 6 80	mA
V_F	$I_F=120\text{A}; T_{VJ}=125^{\circ}\text{C}$ $T_{VJ}=25^{\circ}\text{C}$	1.90 1.80	2.20 2.10	V
V_{TO}	For power-loss calculations only		1.26	V
r_T			1.65	m Ω
R_{thJH} R_{thJC}	DC current DC current		0.228 0.160	K/W
t_{rr}	$I_F=120\text{A}; T_{VJ}=100^{\circ}\text{C}$ $I_F=1\text{A}; T_{VJ}=100^{\circ}\text{C}$	550 90	650 120	ns
I_{RM}	$V_R=1200\text{V}; T_{VJ}=25^{\circ}\text{C}$ $-di/dt=1000\text{A}/\mu\text{s}; T_{VJ}=100^{\circ}\text{C}$		110 165	A A

FEATURES

- * International standard package
- * Copper base plate
- * Planar passivated chips
- * Short recovery time
- * Low switching losses
- * Soft recovery behaviour
- * Isolation voltage 3600 V~
- * RoHS compliant

APPLICATIONS

- * Antiparallel diode for high frequency switching devices
- * Free wheeling diode in converters and motor control circuits
- * Inductive heating and melting
- * Uninterruptible power supplies (UPS)
- * Ultrasonic cleaners and welders

ADVANTAGES

- * High reliability circuit operation
- * Low voltage peaks for reduced protection circuits
- * Low noise switching
- * Low losses