

Three Phase Rectifier Bridge Module

Description

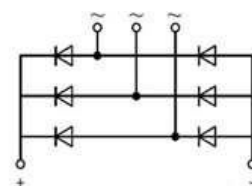
- 1) Low forward voltage and leakage current
- 2) Low inductance package
- 3) High surge current capability

Typical Application

- 1) Field supply for DC motors
- 2) Line rectifiers for transistorized AC motor controllers
- 3) Non-controllable rectifiers for AC/DC converter



D1



Absolute Maximum Ratings (Packaged into D1, unless otherwise specified, $T_{CASE}=25^{\circ}C$)

Parameter	Test Conditions	Symbol	Values				Unit
			12	16	18	20	
Junction temperature range		T_J	-40~+150				$^{\circ}C$
Storage temperature range		T_{STG}	-40~+125				$^{\circ}C$
Repetitive peak reverse voltage		V_{RRM}	1200	1600	1800	2000	V
Non-repetitive peak reverse voltage		V_{RSM}	1300	1700	1900	2100	V
Output current	$T_C=95^{\circ}C$	I_D	150				A
Forward surge current	1/2 cycle, Sine wave 50Hz, $T_J=25^{\circ}C$	I_{FSM}	1500				A
Value for fusing		I^2t	11200				A^2s
RMS isolation voltage	A.C 50Hz(1s/1min)	V_{isol}	3600/3000				V

Electrical Characteristics (Packaged into D1, unless otherwise specified, $T_{CASE}=25^{\circ}C$)

Parameter	Test Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Forward voltage	$I_F=150A, T_J=25^{\circ}C$	V_{FM}	-	-	1.35	V
Reverse leakage current	$V_R=V_{RRM}, T_J=25^{\circ}C$	I_{RRM}	-	-	0.5	mA
	$V_R=V_{RRM}, T_J=150^{\circ}C$		-	-	10	mA
Threshold voltage	$T_J=150^{\circ}C$, for power loss calculation only	V_{TO}	-	-	0.8	V
Slope resistance		r_T	-	-	3.3	m Ω

Thermal Characteristics (Packaged into D1, unless otherwise specified, $T_{CASE}=25^{\circ}C$)

Parameter	Test Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Thermal impedance (junction to case)	Per diode	$R_{th(j-c)}$	-	-	0.75	$^{\circ}C/W$
Mounting torque	Module and heatsink fixed torque, screw M5	M	4.25	-	5.75	Nm
	Electrode connection torque, screw M5		4.25	-	5.75	Nm
Weight			132			g
Case style			D1			

Performance Curves

FIG.1: Forward characteristics(per diode)

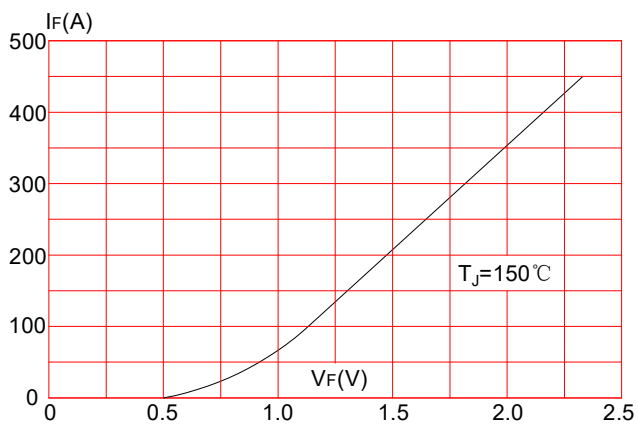


FIG.3: Forward current vs. case temperature

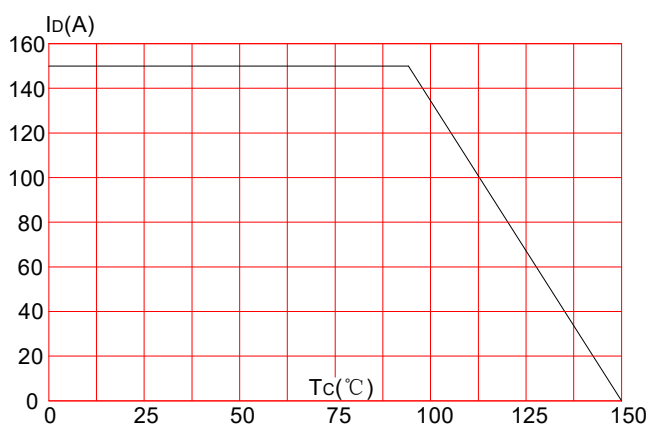


FIG.2: Peak on-state surge current

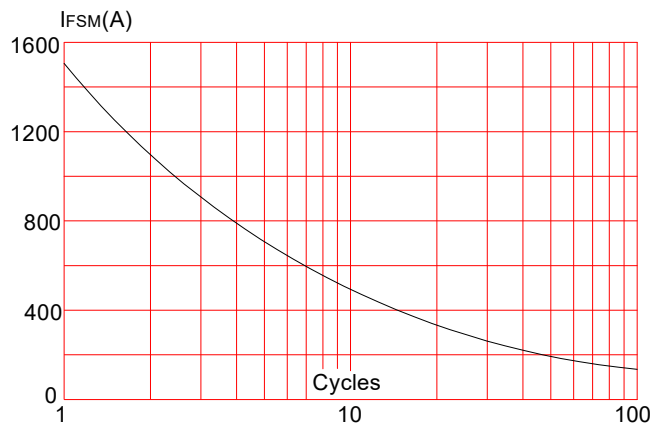
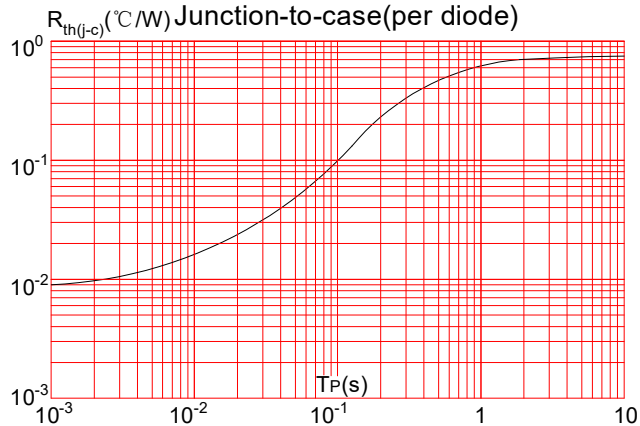


FIG.4: Maximum transient thermal impedance



Mechanical Characteristics(mm)

