SKBPC7512-16

Three Phase Rectifier Bridge



V_{RRM}	1200 to 1600V
I_D	75 Amp

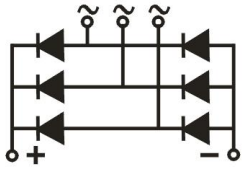
Features

- Very low forward voltage drop
- High surge current capability
- Low thermal resistance
- High thermal conductivity

Applications

- Inverter for AC or DC motor control
- Current stabilized power supply
- Input rectifiers for variable frequency drives
- Input rectifiers for PWM inverter

Circuit



Module Type

Type	V_{RRM}	V_{RSM}
SKBPC7512	1200V	1300V
SKBPC7514	1400V	1500V
SKBPC7516	1600V	1700V

■ Maximum Ratings

Symbol	Item	Conditions	Values	Unit
I_D	Output Current	Three Phase, Full Wave T_c = 78℃	75	A
I_{FSM}	Surge Forward Current	T_j = 25℃, t = 50Hz(10ms), V_R = 0V	750	A
I^2t	Circuit Fusing Consideration	t = 10ms T_j =25℃	2812	A^2s
V_{ISO}	Isolation Breakdown Voltage	AC 50Hz/60Hz; R.M.S; 1min	2500	V
T_j	Operating Junction Temperature		-40 to +150	℃
T_{stg}	Storage Temperature		-40 to +125	℃
M_s	Mounting Torque	To Heatsink(M5)	2.5~3	N·m
Weight	Module (Approximately)		35	g

■ Thermal Characteristics

Symbol	Item	Conditions	Values	Unit
$R_{th(j-c)}$	Thermal Impedance, Max	Junction to Case(Per Total)	0.5	℃/W
		Junction to Case(Per Diode)	3.0	℃/W

■ Electrical Characteristics

Symbol	Item	Conditions	Values			Unit
			Min.	Typ.	Max.	
V_{FM}	Forward Voltage Drop, Max	T_j = 25℃ I_F = 37.5A	—	—	1.18	V
I_{RRM}	Repetitive Peak Reverse Current, Max	T_j = 25℃ $V_R = V_{RRM}$	—	—	0.1	mA
		T_j = 150℃ $V_R = V_{RRM}$			3	
V_{T0}	Threshold Voltage, for power loss calculation only	T_j = 125℃	0.75			V
r_T	Slope Resistance, for power loss calculation only	T_j = 125℃	2.8			mΩ

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Performance Curves

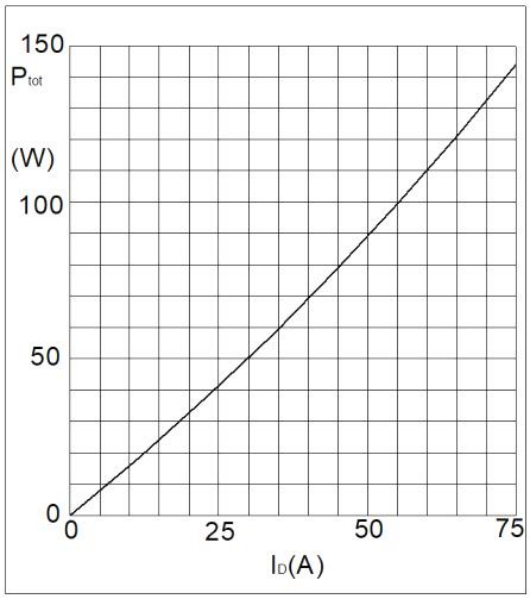


Fig1. Power Dissipation

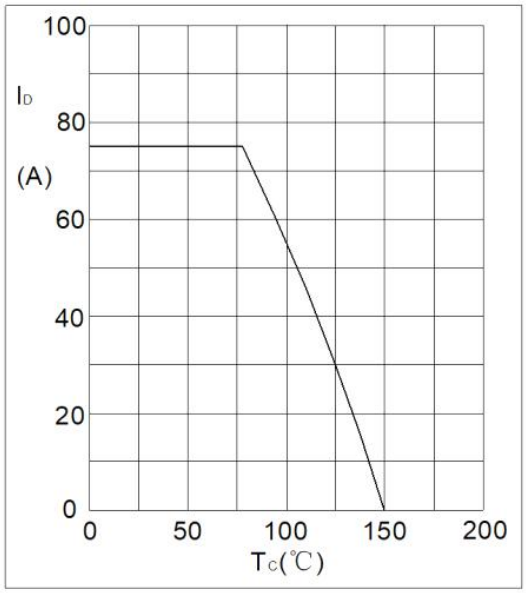


Fig2. Forward Current Derating Curve

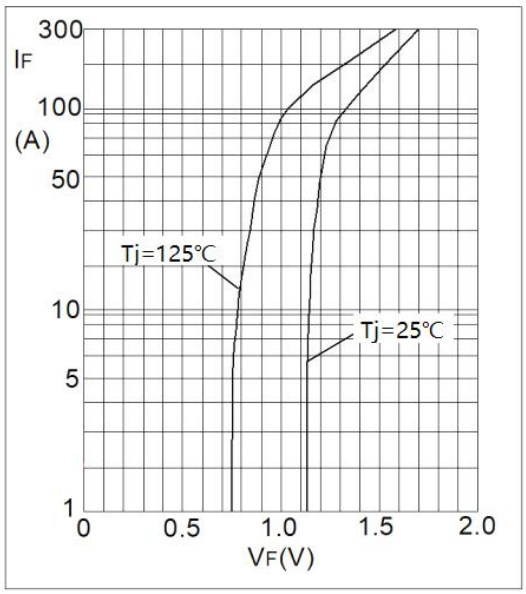


Fig3. Forward Characteristics

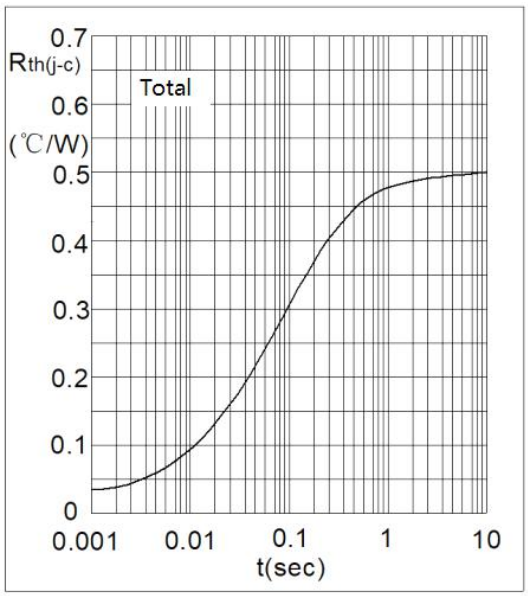


Fig4. Transient Thermal impedance

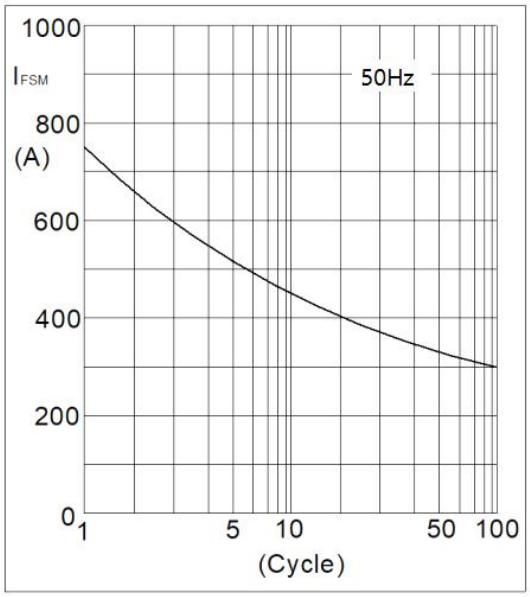
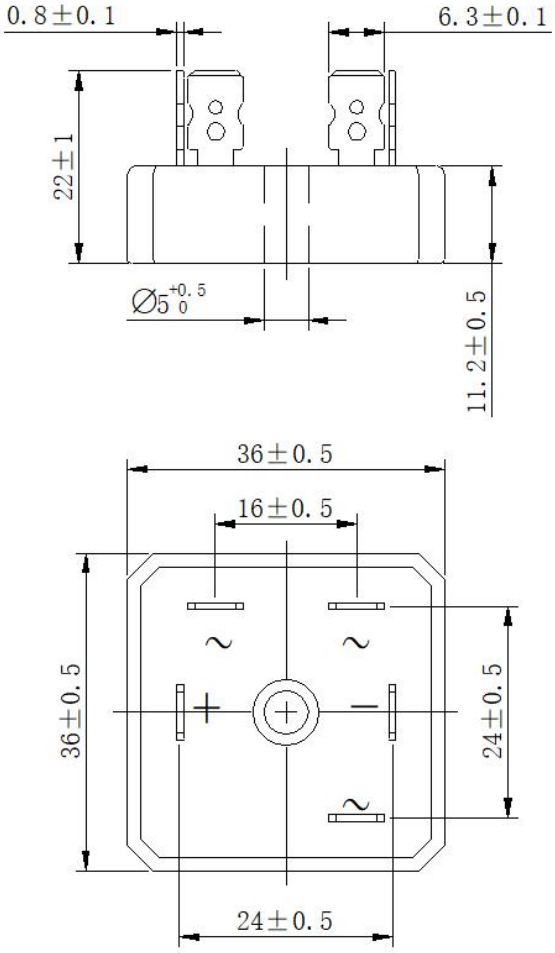


Fig5. Max Non-Repetitive Forward Surge Current

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Package Outline Information

CASE: SKBPC



Dimensions in mm

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