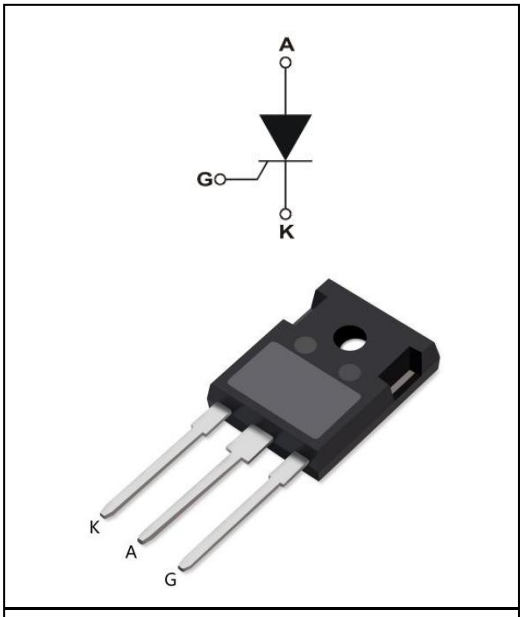
Silicon Controlled Rectifier

Description

BCB75-1600KH, with high ability to withstand the shock loading of large current, provide high dv/dt rate with strong resistance to electromagnetic interference.



THUNDER TO-247H

Main Features

Product Summary	
V_{DRM}/V_{RRM}	1600V
$I_{T(RMS)}$	75A
I_{GT}	30~80mA

Absolute Maximum Ratings:

Symbol	Parameter	Value	Unit
T_{stg}	Storage junction temperature range	-40-150	℃
T_j	Operating Junction Temperature	-40-150	℃
V_{DRM}	Repetitive peak off-state voltage	1600	V
V_{RRM}	Repetitive peak reverse voltage	1600	V
$I_{T(AV)}$	average on-state current	53	A
$I_{T(RMS)}$	RMS on-state current(T_C=25℃)	75	A
I_{TSM}	Non repetitive surge peak on-state voltage(tp=10ms)	750	A
I^2t	I^2t value for fusing (tp=10ms)	2800	A^2S
di/dt	Critical rate of rise of on-state current(I_G=2*I_{GT})	150	A/μS
I_{GM}	Peak gate current	4	A
$P_{G(AV)}$	Average gate power dissipation	1	W
P_{GM}	Peak gate power	5	

Electrical Parameters (T_j=25℃ unless otherwise specified)

Symbol	Test Conditions	Min.	Typ.	Max.	Unit
I_{GT}	V_D=12V RL=33Ω	30		80	mA
V_{GT}				1.5	V
V_{GD}	V_D=V_{DRM} T_j=125℃ R_L=3.3kΩ	0.25			V
I_L	I_G=1.2I_{GT}	60			mA
I_H	I_T=1A	30			mA
dv/dt	V_D=2/3V_{DRM} T_j=125℃ Gate Open	1000			V/μs

Static Characteristics

Symbol	Test Conditions	T_j(℃)	Min.	Typ.	Max.	Unit
V_{TM}	I_{TM}=75A tp=380μs	25			1.40	V
I_{DRM}	V_D=V_{DRM} V_R=V_{RRM}	25			15	uA
I_{RRM}		125			10	mA

Thermal characteristics

Parameter	Symbol	Typ.	Unit
Junction-to-Case	$R_{th(j-c)}$	0.3	℃/W

Typical Performance Characteristics

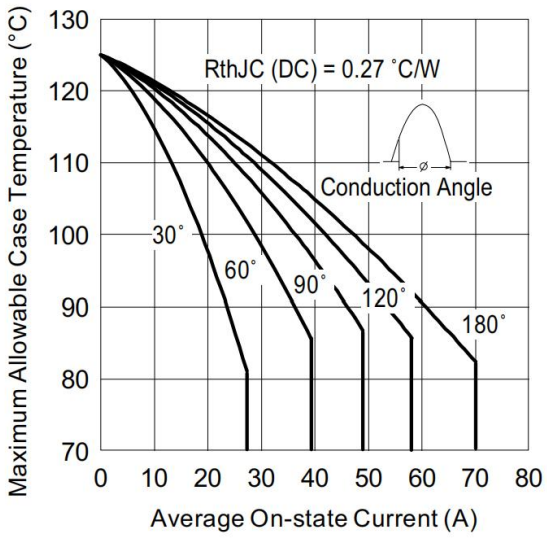


Fig. 1 - Current Rating Characteristics

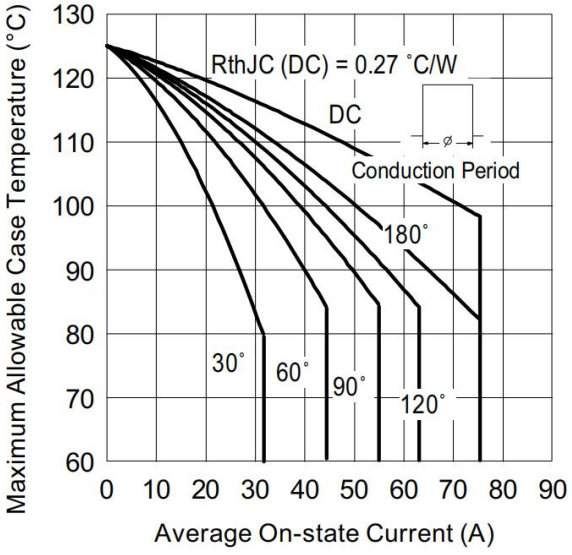


Fig. 2 - Current Rating Characteristics

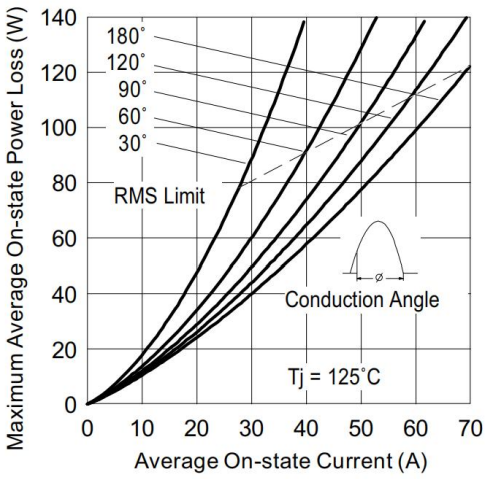


Fig. 3 - On-State Power Loss Characteristics

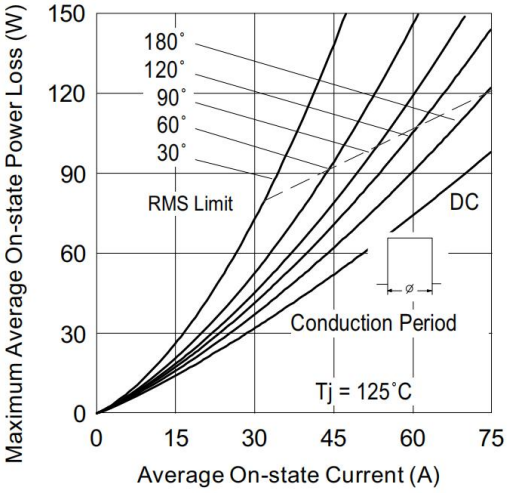


Fig. 4 - On-State Power Loss Characteristics

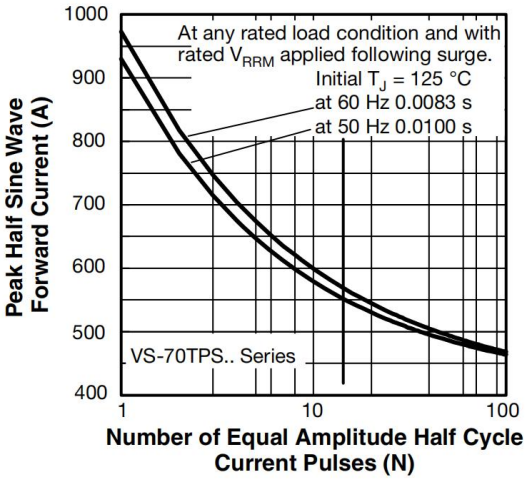


Fig. 5 - Maximum Non-Repetitive Surge Current

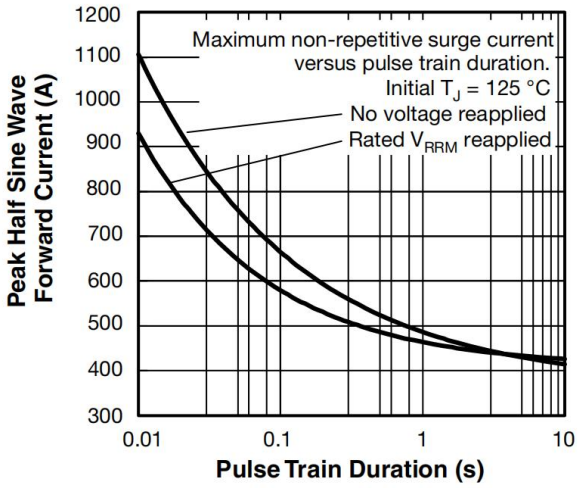


Fig. 6 - Maximum Non-Repetitive Surge Current

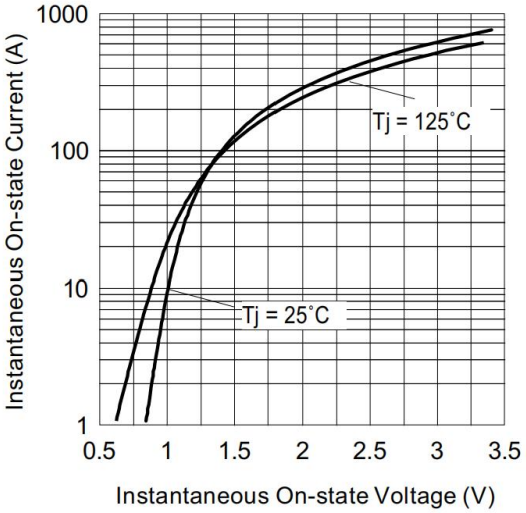
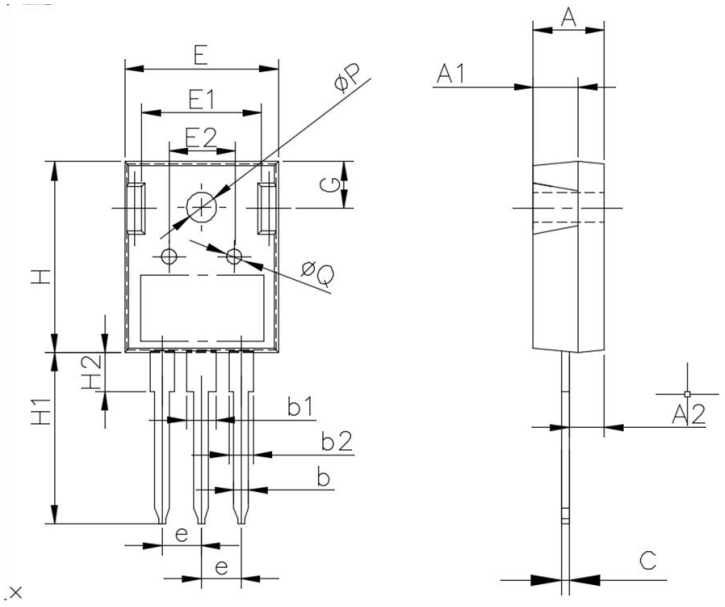


Fig. 7 - On-State Voltage Drop Characteristics

Package Information

TO-247H PACKAGE



基本尺寸

Symbol	单位 mm		
	Min	Nom	Max
A	4.80	5.00	5.20
A1	2.80	3.00	3.20
A2	2.20	2.40	2.60
b	1.05	1.20	1.35
b1	2.80	3.00	3.20
b2	1.80	2.00	2.20
c	0.50	0.60	0.70
e	5.35	5.45	5.75
E	15.6	15.80	16.0
E1	12.3	12.50	12.7
E2	6.00	6.20	6.40
H	20.8	21.0	21.2
H1	19.5	20.0	20.5
H2	3.70	4.00	4.30
G	5.70	5.90	6.10
ΦP	3.30	3.50	3.70
ΦQ	2.30	2.50	2.70

Notice

Thunder Microelectronics Incorporated Limited reserves the right to make changes without further notice to any products or specifications herein. When use the product, be sure to obtain the latest specification.

Thunder Microelectronics Incorporated Limited does not assume any liability arising out of the application or any product described herein. When using Thunder Microelectronics Incorporated Limited products in your equipment, you are requested to take adequate safety measures to prevent the equipment from causing a physical injury ,fire or other problem if any of the products become faulty.

-Headquarters

WuXi Thunder Microelectronics Incorporated Limited

Building E1-9, No.200 LingHu Road, XinWu district,WuXi,China 214135

Tel:+86-510-85160109 Fax:+86-510-85160109