Anti-parallel Module

JS120KQ

Rev.0.1 Oct.17 2024

Description

1)A package consists of two inverse parallel SCR chips, which rated voltage is up to 1800V
2) Welding by vacuum welding technology, which provide high reliability
3) Insulated by silicone gel, provide a insulation voltage of 3000V~
4) UL 1557 item recognized. (File No.: E252906)

Typical Application

Soft start, solid state relay, AC/DC switch, temperature control.

Absolute Maximum Ratings (Packaged into modules, unless otherwise specified, T_{CASE}=25℃)

Parameter	Test Conditions	Symbol	Values	Unit
Operating junction temperature range		T_J	-40-125	℃
Repetitive peak off-state voltage	T_J=25℃	V_{DRM}	1200/1600/1800	V
Repetitive peak reverse voltage	T_J=25℃	V_{RRM}	1200/1600/1800	V
RMS on-state current	T_C=80℃	$I_{T(RMS)}$	135	A
Peak on-state surge current	t_P=10ms V_R=0.6V_{RRM}	I_{TSM}	2000	A
I^2t value for fusing	t_P=10ms V_R=0.6V_{RRM}	I^2t	20000	A^2s
Critical rate of rise of on-state current	I_G=2×I_{GT}	di/dt	150	A/μs

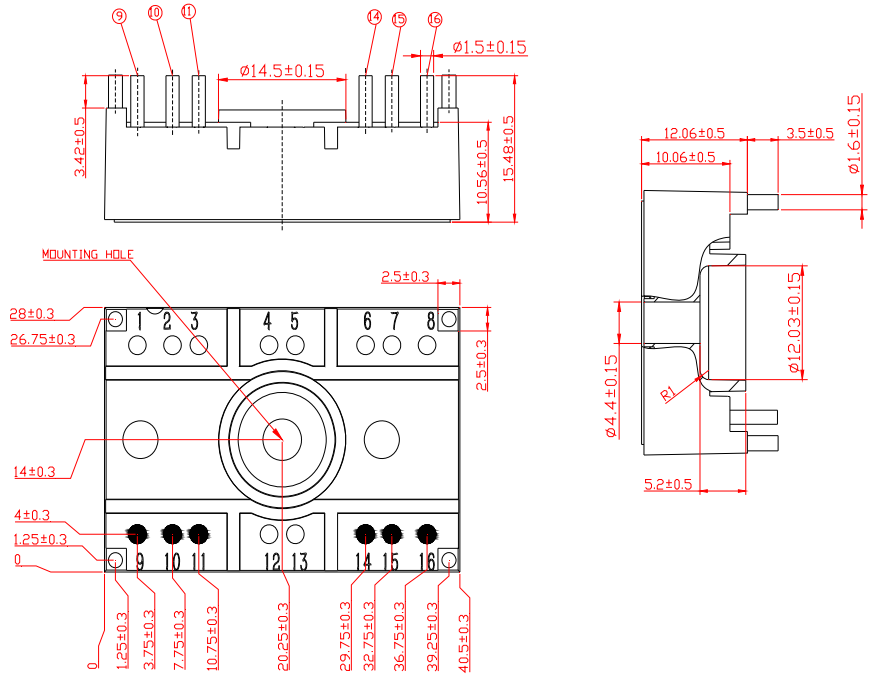
Electrical Characteristics (Packaged into modules, unless otherwise specified, T_{CASE}=25℃)

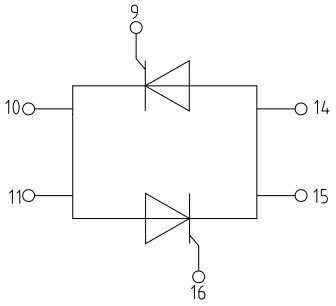
Parameter	Test Conditions	Symbol	Values	Unit
Peak on-state voltage	I_T=300A t_P=380μs	V_{TM}	≤1.85	V
Threshold voltage	T_J=125℃	V_{TO}	≤0.9	V
Dynamic resistance	T_J=125℃	R_d	≤3.5	mΩ
Repetitive peak off-state current	V_D=V_{RRM} T_C=25℃ T_C=125℃	 I_{DRM1} I_{DRM2}	 ≤100 ≤20	 μA mA
Repetitive peak reverse current	V_R=V_{RRM} T_C=25℃ T_C=125℃	 I_{RRM1} I_{RRM2}	 ≤100 ≤20	 μA mA
Triggering gate current	V_D=12V R_L=30Ω	I_{GT}	20-120	mA
Holding current	I_T=1A	I_H	≤250	mA

Latching current	I_G=1.2I_{GT}	I_L	≤350	mA
Triggering gate voltage	V_D=12V R_L=30Ω	V_{GT}	≤1.5	V
Non triggering gate voltage	V_D=V_{DRM} T_J=125℃	V_{GD}	≥0.2	V
Critical rate of rise of voltage	V_D=2/3V_{DRM} T_J=125℃ Gate Open	dv/dt	≥1000	V/μs
Thermal resistance	Junction to case	$R_{th(j-c)}$	0.45	℃/W

Mechanical Characteristics

Module size	40.5×28mm
Module height	15.48mm





symbol

Ordering Information

JS — JieJie Semiconductor Co., Ltd

120 — $I_{T(RMS)}$=135A

KQ — Module of anti-parallel of SCRs

-12
- 12:V_{DRM}/V_{RRM}≥1200V
- 16:V_{DRM}/V_{RRM}≥1600V
- 18:V_{DRM}/V_{RRM}≥1800V