

Anti-parallel Module

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~



Typical Application

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

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

Parameter	Test Conditions	Symbol	Values	Unit
Operating junction temperature range		T_J	-40-125	$^{\circ}C$
Repetitive peak off-state voltage	$T_J=25^{\circ}C$	V_{DRM}	1200/1600/1800	V
Repetitive peak reverse voltage	$T_J=25^{\circ}C$	V_{RRM}	1200/1600/1800	V
RMS on-state current	$T_C=80^{\circ}C$	$I_{T(RMS)}$	70	A
Peak on-state surge current	$t_p=10ms$ $V_R=0.6V_{RRM}$	I_{TSM}	700	A
I^2t value for fusing	$t_p=10ms$ $V_R=0.6V_{RRM}$	I^2t	2450	A^2s
Critical rate of rise of on-state current	$I_G=2 \times I_{GT}$	di/dt	150	$A/\mu s$

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

Parameter	Test Conditions	Symbol	Values	Unit
Peak on-state voltage	$I_T=105A$ $t_p=380\mu s$	V_{TM}	≤ 1.8	V
Threshold voltage	$T_J=125^{\circ}C$	V_{TO}	≤ 0.9	V
Dynamic resistance	$T_J=125^{\circ}C$	R_d	≤ 8	m Ω
Repetitive peak off-state current	$V_D=V_{RRM}$ $T_C=25^{\circ}C$	I_{DRM1}	≤ 50	μA
	$T_C=125^{\circ}C$	I_{DRM2}	≤ 15	mA
Repetitive peak reverse current	$V_R=V_{RRM}$ $T_C=25^{\circ}C$	I_{RRM1}	≤ 50	μA
	$T_C=125^{\circ}C$	I_{RRM2}	≤ 15	mA
Triggering gate current	$V_D=12V$ $R_L=30\Omega$	I_{GT}	20-120	mA
Holding current	$I_T=1A$	I_H	≤ 150	mA
Latching current	$I_G=1.2I_{GT}$	I_L	≤ 250	mA
Triggering gate voltage	$V_D=12V$ $R_L=30\Omega$	V_{GT}	≤ 1.5	V
Non triggering gate voltage	$V_D=V_{DRM}$ $T_J=125^{\circ}C$	V_{GD}	≥ 0.2	V
Critical rate of rise of voltage	$V_D=2/3V_{DRM}$ $T_J=125^{\circ}C$ Gate Open	dv/dt	≥ 1000	V/ μs
Thermal resistance	Junction to case	$R_{th(j-c)}$	0.8	$^{\circ}C/W$

Mechanical Characteristics

Module size	31×24mm
Module height	14.73mm

Ordering Information

<p>AK</p> <p>Aiko Electronics Technology Co., LTD</p>	<p>70</p> <p>$I_T(RMS)=70A$</p>	<p>KQ</p> <p>Module of anti-parallel of SCRs</p>	<p>-12</p> <p>12: $V_{DRM}/V_{RRM} \geq 1200V$ 16: $V_{DRM}/V_{RRM} \geq 1600V$ 18: $V_{DRM}/V_{RRM} \geq 1800V$</p>
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