

JC045KQ-12

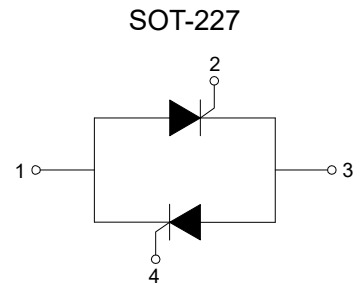
Description

- 1) Industrial standard package
- 2) High surge capability
- 3) Glass passivated chips
- 4) Electrically isolated by DBC ceramic



Typical Application

- 1) DC motor control and drivers
- 2) Battery charges
- 3) Power converters
- 4) Lighting control



Absolute Maximum Ratings (Packaged into SOT-227, unless otherwise specified, $T_{CASE}=25^{\circ}C$)

Parameter	Test Conditions	Symbol	Values	Unit
Repetitive peak off-state voltage		V_{DRM}	1200/1600	V
Repetitive peak reverse voltage		V_{RRM}	1200/1600	V
Average forward current	$T_C=80^{\circ}C$	$I_{T(AV)}$	45	A
Surge forward current	$T_C=25^{\circ}C$	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	$A/\mu s$
Insulation voltage	50Hz, 1min, RMS	V_{ISO}	2500	V
Junction temperature range		T_J	-40~+125	$^{\circ}C$
Storage temperature range		T_{STG}	-40~+150	$^{\circ}C$

Electrical Characteristics (Packaged into SOT-227, unless otherwise specified, $T_{CASE}=25^{\circ}C$)

Parameter	Test Conditions	Symbol	Values	Unit
Peak on-state voltage	$I_T=140A$ $t_p=380\mu s$	V_{TM}	≤ 1.8	V
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}	≤ 10	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}	≤ 10	mA
Triggering gate current	$V_D=12V$ $R_L=30\Omega$	I_{GT}	10-80	mA
Holding current	$I_T=1A$	I_H	≤ 150	mA
Latching current	$I_G=1.2 I_{GT}$	I_L	≤ 250	mA
Triggering gate voltage	$V_D=12V$ $R_L=30\Omega$	V_{GT}	≤ 1.3	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

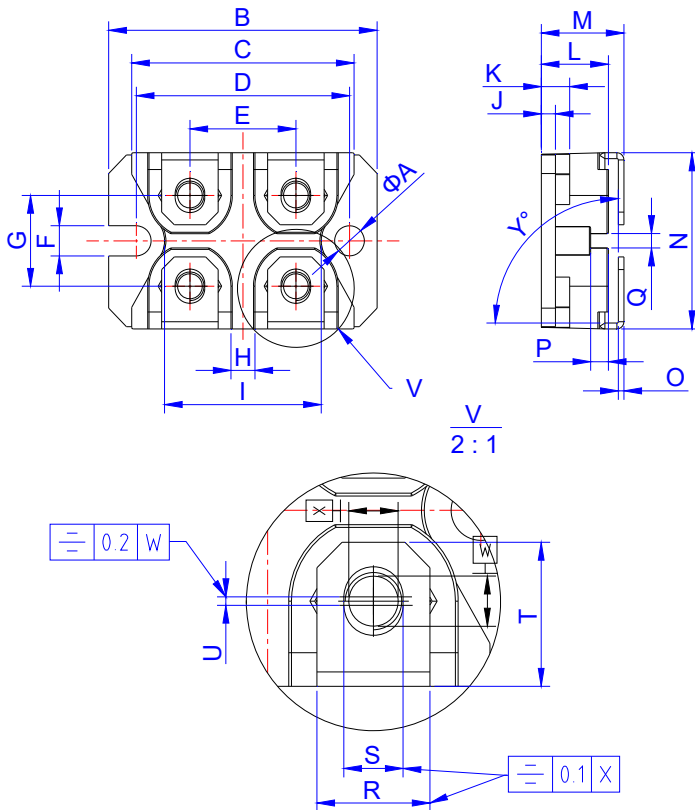
Mechanical Characteristics (Packaged into SOT-227, unless otherwise specified, $T_{CASE}=25^{\circ}C$)

Parameter	Test Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Mounting torque	Base plate to heatsink screw M4	M	1.0	-	1.5	N·m
	Electrode to terminal screw M4		1.0	-	1.3	N·m
Weight			-	35	-	g
Case style			SOT-227			

Ordering Information

<p>J</p> <p>JieJie Semiconductor Co.,Ltd</p>	<p>C</p> <p>SCRs</p>	<p>045</p> <p>$I_{T(AV)}=45A$</p>	<p>KQ</p> <p>Anti-parallel module</p>	<p>-12</p> <p>12: $V_{DRM}/V_{RRM} \geq 1200V$ 16: $V_{DRM}/V_{RRM} \geq 1600V$</p>
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Mechanical Characteristics



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.1	4.2	4.4	0.161	0.165	0.173
B	38.0	38.2	38.4	1.496	1.504	1.512
C	31.1	31.5	31.9	1.224	1.240	1.256
D	30.1	30.2	30.3	1.185	1.189	1.193
E	14.8	15.0	15.2	0.583	0.591	0.598
F	4.1	4.2	4.4	0.161	0.165	0.173
G	12.3	12.5	12.7	0.484	0.492	0.500
H		4.2			0.165	
I		21.6			0.850	
J		2			0.079	
K		4.05			0.159	
L		9.5			0.374	
M	11.6	11.9	12.2	0.457	0.469	0.480
N	24.7	25.1	25.5	0.972	0.988	1.004
O		0.8			0.031	
P		2.6			0.102	
Q		1.7			0.067	
R		8			0.315	
S	4.1	4.2	4.4	0.161	0.165	0.173
T		10.7			0.421	
U		1			0.039	
Y	89°	90°	91°	89°	90°	91°

Technical requirements:

1. Unmarked tolerances of dimension are performed in accordance with GB/T 1804-2000 Level C
2. Unmarked tolerances of form and position are performed in accordance with GB/T 1184-1996 Level L

Package Information-SOT-227

OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON (PCS)
TUBE	8	80	160

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