

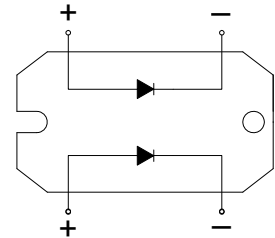
## JE1002K2-12

### Description:

- 1) Ultrafast recovery time
- 2) High frequency operation
- 3) Low leakage current
- 4) Low forward voltage
- 5) Epitaxial chip construction



SOT-227



symbol

### Typical Application:

- 1) PFC
- 2) Welding machine
- 3) Rectifiers in switch mode power supplies(SMPS)

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

Parameter	Test Conditions	Symbol	Values	Unit
Repetitive peak reverse voltage		$V_{RRM}$	1200	V
Average forward current	$T_C=110^{\circ}C$	$I_{F(AV)}$	100	A
Surge forward current	$T_C=25^{\circ}C$	$I_{FSM}$	850	A
Insulation voltage	50Hz,1min,RMS	$V_{ISO}$	2500	V
Junction temperature range		$T_J$	-55~+150	$^{\circ}C$
Storage temperature range		$T_{STG}$	-55~+150	$^{\circ}C$

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

Parameter	Test Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Forward voltage	$I_F=100A, T_J=25^{\circ}C$	$V_F$	-	3.0	3.5	V
	$I_F=100A, T_J=125^{\circ}C$		-	2.4	3.0	V
Reverse leakage current	$V_R=V_{RRM}, T_J=25^{\circ}C$	$I_R$	-	-	30	$\mu A$
	$V_R=V_{RRM}, T_J=150^{\circ}C$		-	-	300	$\mu A$



## Ultrafast Recovery Diode Module

**Dynamic Recovery Characteristic** (Packaged into SOT-227, unless otherwise specified,  $T_{CASE}=25^{\circ}C$ )

Parameter	Test Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Reverse recovery time	$I_F=0.5A, I_R=1A,$ $I_{RR}=0.25A, T_J=25^{\circ}C$	trr	-	98	-	ns

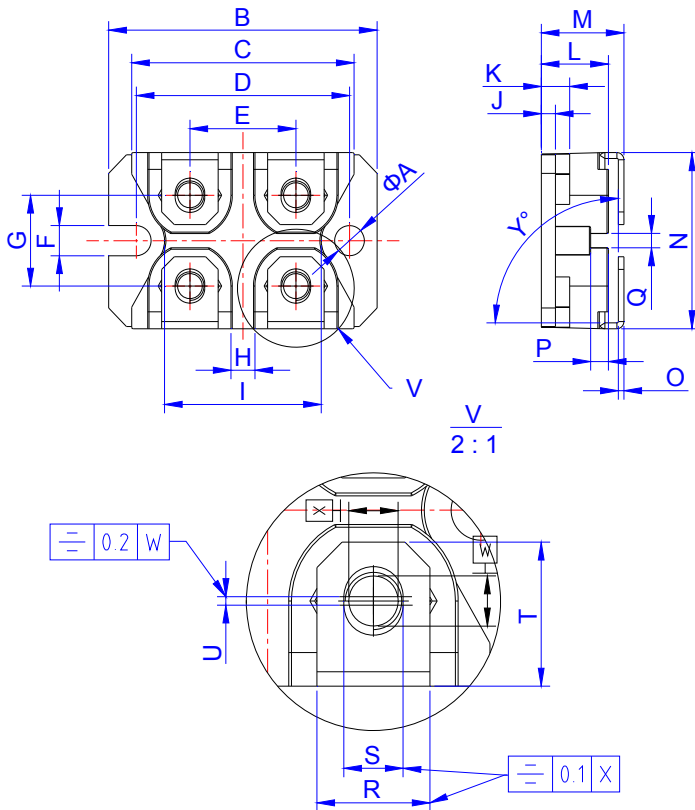
**Mechanical Characteristics**(Packaged into SOT-227, unless otherwise specified,  $T_{CASE}=25^{\circ}C$ )

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			-	29	-	g
Case style			SOT-227			

### Ordering Information

<u>J</u> JieJie Semiconductor Co.,Ltd Ultrafast recovery diode	<u>E</u> $I_{F(AV)}=100A$	<u>100</u>	<u>K2</u> Dual circuit module	<u>-12</u> $12:V_{RRM} \geq 1200V$
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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	800

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