SC06J065A

产品特性（Feature）

V_{RRM}	650	V
I_F,T_C≤150℃	6.0	A
$Q_{C\ Typ}$	17	nC

- 零反向恢复电流

No reverse recovery current

- 正温度系数

Positive temperature coefficient

- 不受温度影响的开关特性

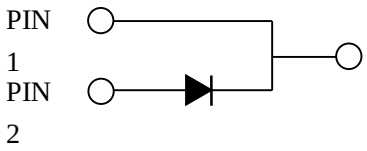
Temperature independent switching behavior

- 低压降、高工作温度

Low forward voltage and high operating temperature

- 优异的浪涌电流能力

Excellent surge current capability



产品优点（Benefits）

- 降低电磁干扰

Reduce EMI

- 高功率密度，可用于更高的工作频率

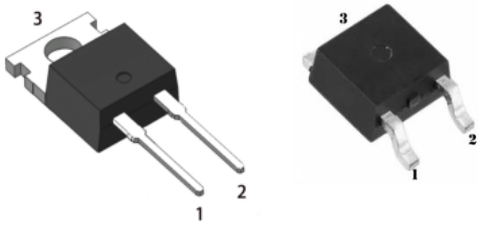
High power density，enable higher frequency

- 降低散热要求，节约系统成本和尺寸

Reduce cooling requirements，save system cost and size

- 极大提升系统效率

Significantly improve system efficiency



应用领域（Applications）

- 光伏逆变器

Solar inverters

•功率因数校正

Power Factor Correction

- 不间断电源

Uninterruptable power supplies

- 电机驱动

Motor drives

订货型号（Order Message）

订货型号Order codes		印记	封装
有卤-条管 Halogen-Tube	无卤-条管 Halogen Free-Tube	Marking	Package
SC06J065A-CL-B	SC06J065A-CL-BR	SC06J065A	TO-220-2L
SC06J065A-R-B	SC06J065A-R-BR	SC06J065A	DPAK
SC06J065A-AE-B	SC06J065A-AE-BR	SC06J065A	DFN8*8

额定值 Maximum ratings

Symbol	Parameter	Value	Unit	Test Conditions	Note
V_{RRM}	反向重复峰值电压 Repetitive Peak Reverse Voltage	650	V		
V_{RSM}	反向浪涌峰值电压 Surge Peak Reverse Voltage	650	V		
V_{DC}	反向直流电压 DC Blocking Voltage	650	V		
I_F	正向平均电流 Continuous Forward Current	6	A	T_C=150˚C	Fig. 7
I_{FRM}	正向重复浪涌电流 Repetitive Peak Forward Surge Current	40	A	T_C=25˚C, t_P=10 ms, Half Sine Wave,	
I_{FSM}	正向非重复浪涌电流 Non-Repetitive Peak Forward Surge Current	65	A	TC=25˚C, t_P=10ms, Half Sine Wave	
$I_{F,Max}$	非重复正向峰值电流 Non-Repetitive Peak Forward Current	520	A	T_C=25˚C, t_P= 10 μs, Pulse	
P_{tot}	耗散功率 Power Dissipation	111 48	W	T_C=25˚C T_C=110˚C	Fig. 6
T_J , T_{stg}	工作温度和存储温度 Operating Junction and Storage Temperature	-55 to +175	˚C		

电学特性 Electrical Characteristics, T_C = 25˚C unless otherwise specified

Symbol	Parameter	Typ.	Max.	Unit	Test Conditions	Note
V_F	正向电压 Forward Voltage	1.45	1.70	V	I_F = 6.0A T_J=25 ℃	Fig. 1
		1.75	2.0		I_F = 6.0 A T_J=175 ℃	
I_R	反向电流 Reverse Current	2 40	20 200	μA	V_R = 650 V T_J=25 ℃ V_R = 650 V T_J=175 ℃	Fig. 2
Q_C	总储存电荷 Total Capacitive Charge	17		nC	V_R = 400, T_J = 25 ℃ $Q_C = \int_0^{V_R} C(V)dV$	Fig. 4
C	总电容 Total Capacitance	332 33 28		pF	V_R = 0 V, T_J = 25 ℃, f = 1 MHz V_R = 200, T_J = 25˚C, f = 1 MHz V_R = 400V, T_J = 25˚C, f = 1 MHz	Fig. 3
E_C	电容储存能量 Capacitance Stored Energy	4.3		μJ	V_R =400 V	Fig. 5

热性能(Thermal Characteristics)

Symbol	Parameter	Typ.	Unit	Note
$R_{\theta JC}$	Thermal Resistance from Junction to Case	1.35	℃/W	Fig. 8
		1.96	℃/W	Fig. 9
		2.68	℃/W	Fig. 10

性能曲线图 Performance curve

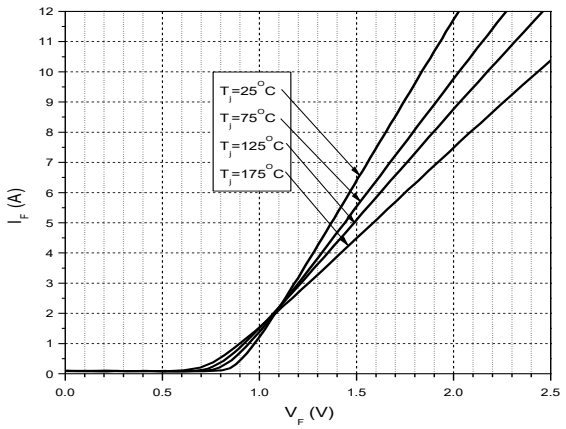


Figure 1.Forward Characteristics

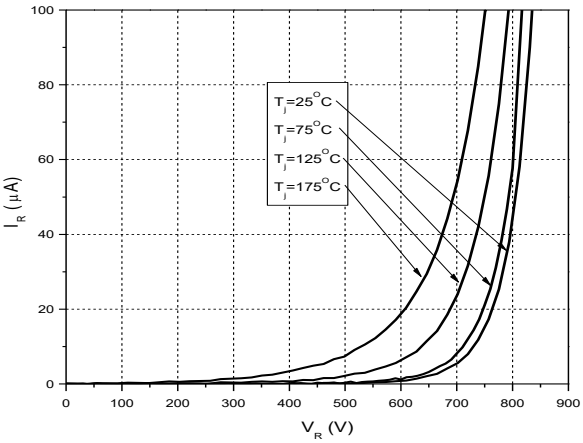


Figure 2. Reverse Characteristics

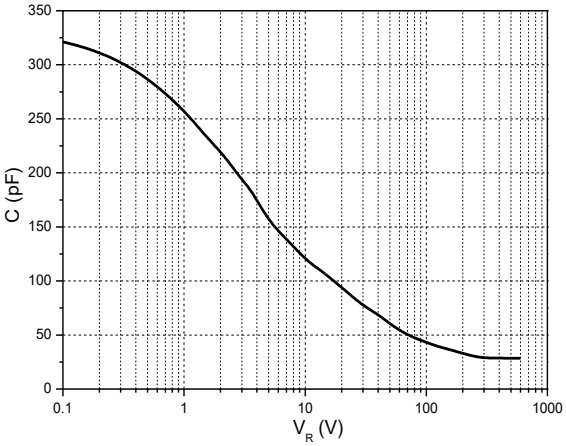


Figure 3.Capacitance vs. Reverse Voltage

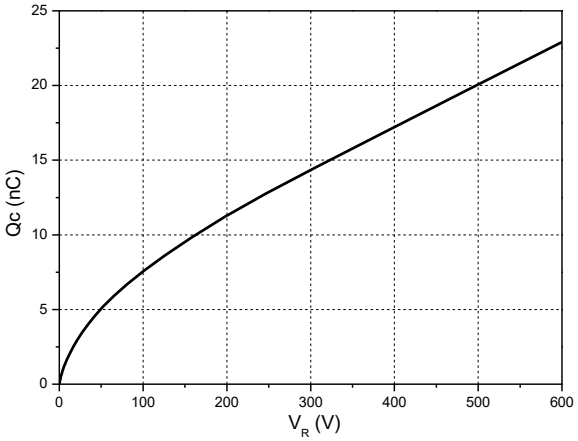


Figure 4. Capacitance Charge vs. Reverse Voltage

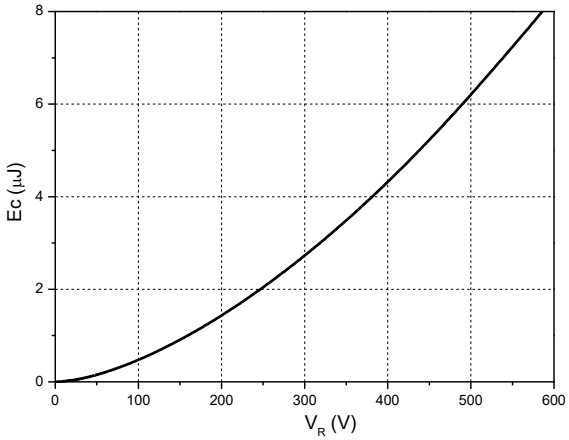


Figure 5. Capacitance Stored Energy

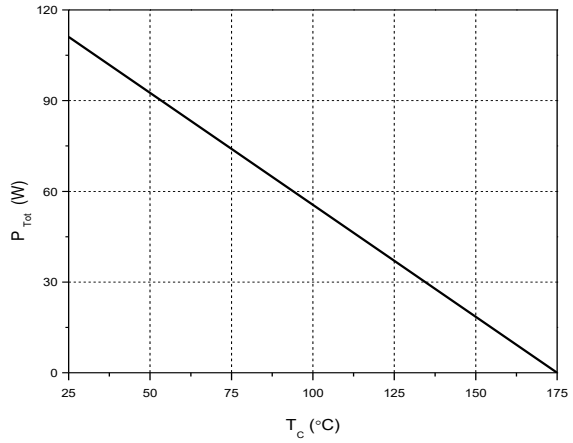


Figure 6. Power Derating

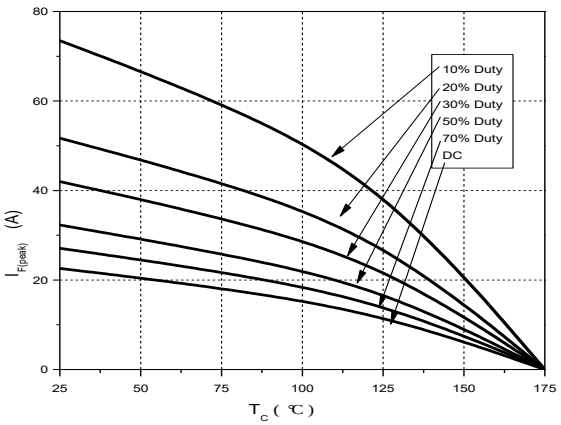


Figure 7. Current Derating

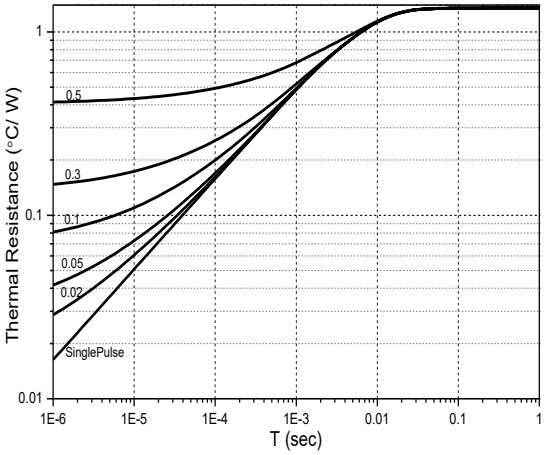


Figure 8. Transient Thermal Impendance(TO-220)

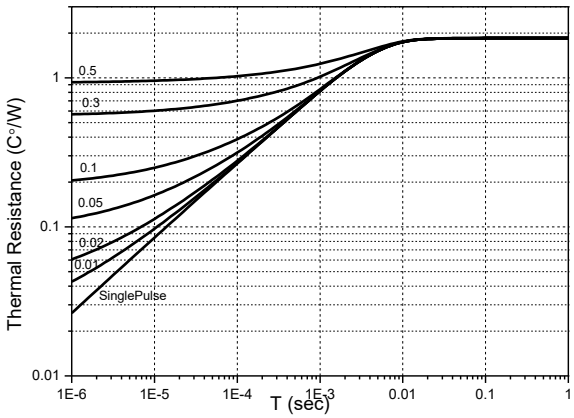


Figure 9. Transient Thermal Impendance(DPAK)

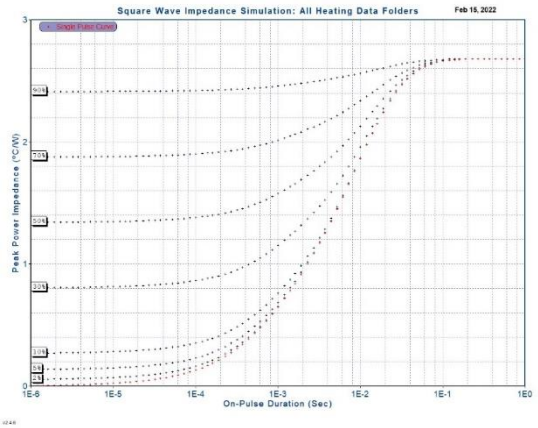
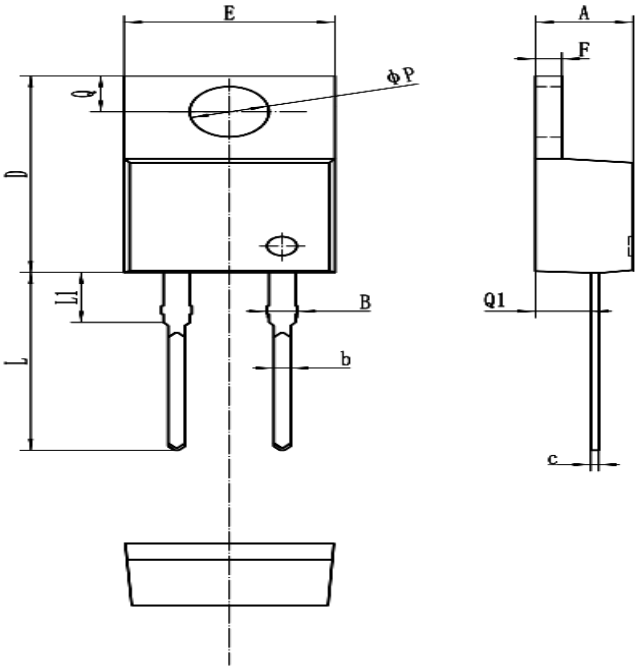


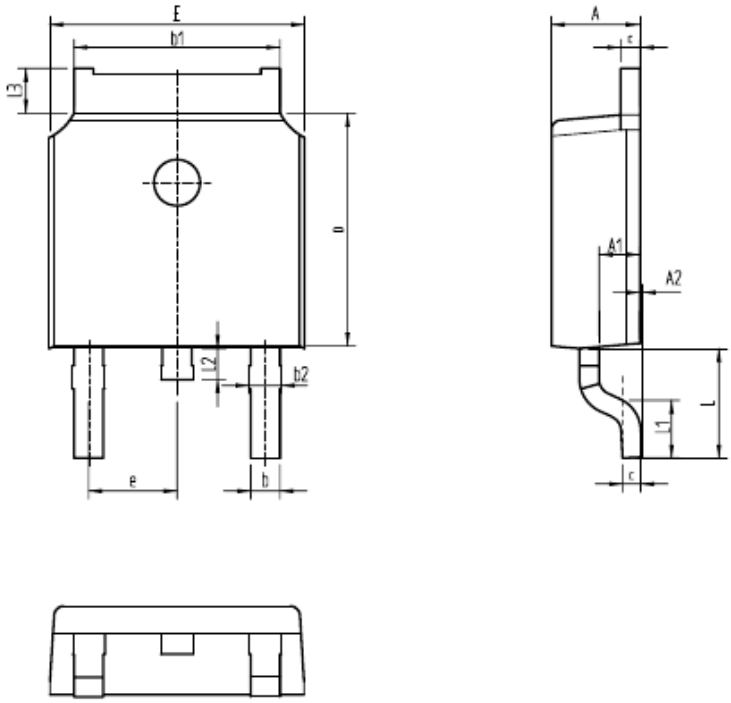
Figure 10. Transient Thermal Impendance(DFN8*8)

Package Dimensions: TO-220-2L



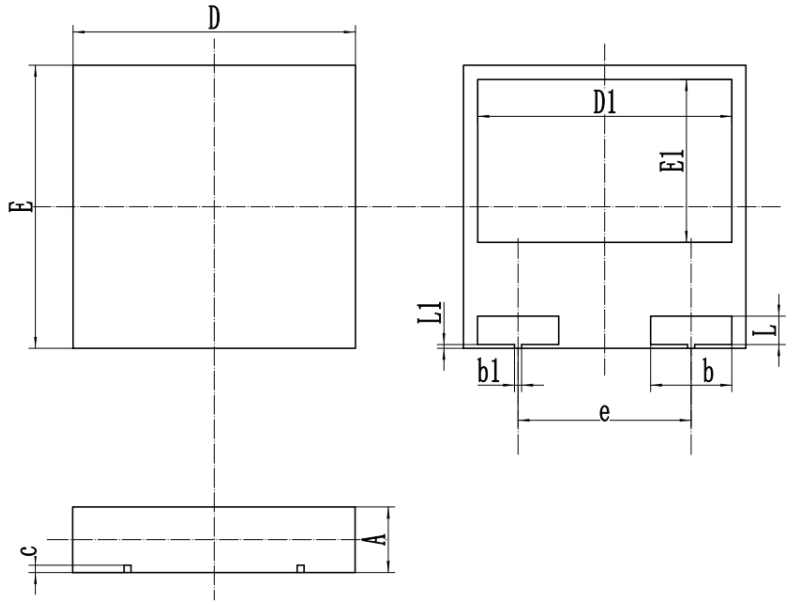
mm		
SYMBOL	MIN	MAX
A	4.50	4.90
B	1.10	1.40
b	0.70	0.95
c	0.28	0.70
D	14.50	16.00
E	9.60	10.40
e	5.08TYP	
F	1.15	1.40
L	13.00	14.10
L1	3.60	4.00
ΦP	3.50	4.05
Q	2.40	3.00
Q1	2.50	2.90

Package Dimensions: DPAK



SYMBOL	mm	
	MIN	MAX
A	2.16	2.41
A1	0.97	1.17
A2	0.00	0.15
b	0.63	0.93
b1	5.13	5.53
b2	0.66	0.96
c	0.40	0.60
D	5.80	6.40
E	6.30	6.90
e	2.286BSC	
L	2.50	3.30
L1	1.20	1.80
L2	0.60	1.00
L3	0.85	1.30

Package Dimensions: DFN8*8



SYMBOL	mm	
	MIN	MAX
*A	1.65	2.05
*b	2.10	2.50
b1	0.20	0.60
*c	0.05	0.30
*D	7.75	8.25
*D1	7.00	7.40
*E	7.75	8.25
*E1	4.40	4.80
*e	4.70	5.10
*L	0.60	1.00
L1	-	0.25
标*为检验尺寸		

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联系方式

吉林华微电子股份有限公司

公司地址：吉林省吉林市深圳街 99 号

邮编：132013

总机：86-432-64678411

传真：86-432-64665812

网址：www.hwdz.com.cn

CONTACT

JILIN SINO-MICROELECTRONICS CO., LTD.

ADD: No.99 Shenzhen Street, Jilin City, Jilin Province, China.

Post Code: 132013

Tel： 86-432-64678411

Fax：86-432-64665812

Web Site：www.hwdz.com.cn