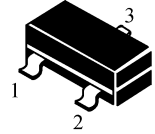




2SA812

SOT-23

- 1. BASE
- 2. EMITTER
- 3. COLLECTOR



■MAXIMUM RATINGS 最大額定值

Characteristic 特性參數	Symbol 符號	Rating 額定值	Unit 單位
Collector-Emitter Voltage 集電極-發射極電壓	$V_{CEO}$	-50	Vdc
Collector-Base Voltage 集電極-基極電壓	$V_{CBO}$	-60	Vdc
Emitter-Base Voltage 發射極-基極電壓	$V_{EBO}$	-5.0	Vdc
Collector Current—Continuous 集電極電流-連續	$I_c$	-100	mAdc

■THERMAL CHARACTERISTICS 熱特性

Characteristic 特性參數	Symbol 符號	Max 最大值	Unit 單位
Total Device Dissipation 總耗散功率 FR-5 Board(1) $T_A=25^{\circ}\text{C}$ 環境溫度為 $25^{\circ}\text{C}$ Derate above $25^{\circ}\text{C}$ 超過 $25^{\circ}\text{C}$ 遞減	$P_D$	225 1.8	mW mW/ $^{\circ}\text{C}$
Total Device Dissipation 總耗散功率 Alumina Substrate 氧化鋁襯底,(2) $T_A=25^{\circ}\text{C}$ Derate above $25^{\circ}\text{C}$ 超過 $25^{\circ}\text{C}$ 遞減	$P_D$	300 2.4	mW mW/ $^{\circ}\text{C}$
Thermal Resistance Junction to Ambient 熱阻	$R_{\theta JA}$	417	$^{\circ}\text{C}/\text{W}$
Junction and Storage Temperature 結溫和儲存溫度	$T_J, T_{stg}$	-55to+150 $^{\circ}\text{C}$	

■DEVICE MARKING 打標

2SA812=M4-M7  
HFE:90-180=M4 135-270=M5 200-400=M6 300-600=M7

KEL 2SA812



2SA812

### ■ELECTRICAL CHARACTERISTICS 電特性

( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如無特殊說明，溫度為  $25^{\circ}\text{C}$ )

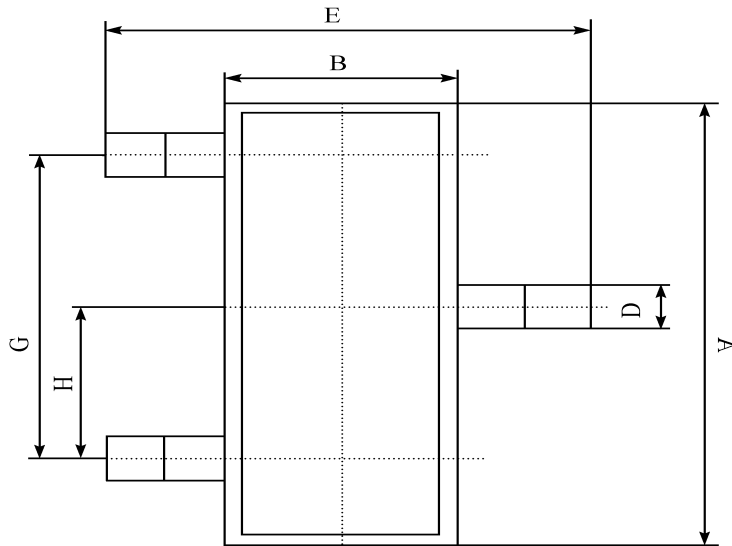
Characteristic 特性參數	Symbol 符號	Min 最小值	Type 典型值	Max 最大值	Unit 單位
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### ■OFF CHARACTERISTICS 截止電特性

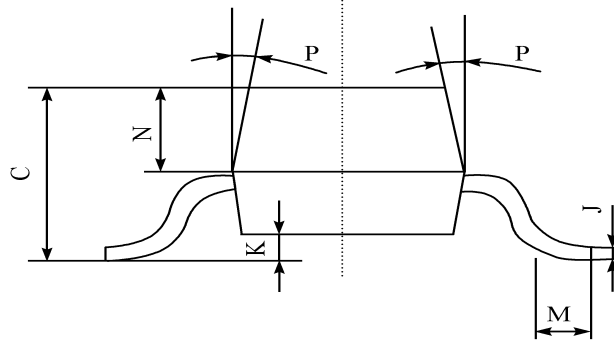
Emitter Cutoff Current 發射極截止電流( $V_{EB}=-5.0\text{v}, I_C=0$ )	$I_{EBO}$	—	—	-0.1	$\mu\text{A}$
Collector Cutoff Current 集電極截止電流( $V_{CB}=-60\text{v}, I_E=0$ )	$I_{CBO}$	—	—	-0.1	$\mu\text{A}$
Collector Saturation Voltage 集電極飽和壓降( $I_C=-100\text{mA dc}, I_B=-10\text{mA}$ )	$V_{CE(\text{sat})}$	—	-0.18	-0.3	Vdc
Base to Emitter Voltage 基極-發射極電壓( $V_{CE}=-6.0\text{v}, I_C=-1.0\text{mA}$ )	$V_{BE}$	-0.58	-0.62	-0.68	Vdc
DC Current Gain 直流電流增益 ( $V_{CE}=-6.0\text{v}, I_C=-1.0\text{mA}$ )	$H_{FE}$	90	200	600	
Gain Bandwidth Product 增益帶寬乘積( $V_{CE}=-6.0\text{v}, I_C=-1.0\text{mA}$ )	$f_T$	—	-180	—	MHz
Output Capacitance 輸出電容( $V_{CB}=-10\text{v}, I_E=0, f=1.0\text{MHz}$ )	$C_{ob}$	—	4.5	—	pF

1. FR-5=1.0×0.75×0.062in.
2. Alumina=0.4×0.3×0.024in.99.5%alumina.

## ■ DIMENSION 外形封裝尺寸



序號	數值及公差
A	2.90 ± 0.10
B	1.30 ± 0.10
C	1.00 ± 0.10
D	0.40 ± 0.10
E	2.40 ± 0.20
G	1.90 ± 0.10
H	0.95 ± 0.05
J	0.13 ± 0.05
K	0.00 - 0.10
M	≥ 0.2
N	0.60 ± 0.10
P	7 ± 2°



This datasheet presents technical data of Tak Cheong's Silicon Rectifier Diodes. Complete specifications for the individual devices are provided in the form of datasheets. A comprehensive Selector Guide is included to simplify the task of choosing the best set of components required for a specific application. For additional information, please visit our website <http://www.takcheong.com>.

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