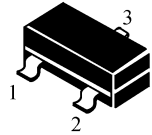


SOT-23

- 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}	20	Vdc
Collector-Base Voltage 集電極基極電壓	V_{CBO}	30	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	50	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°C Derate above 25°C 超過 25°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°C 超過 25°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

S9018=J8
HFE:40-72; 72-97; 97-146; 146-200



S9018

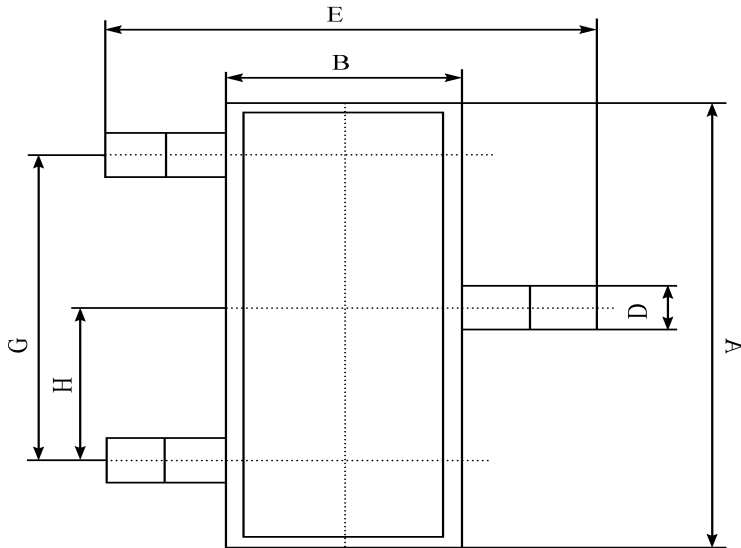
■ELECTRICAL CHARACTERISTICS 電特性

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

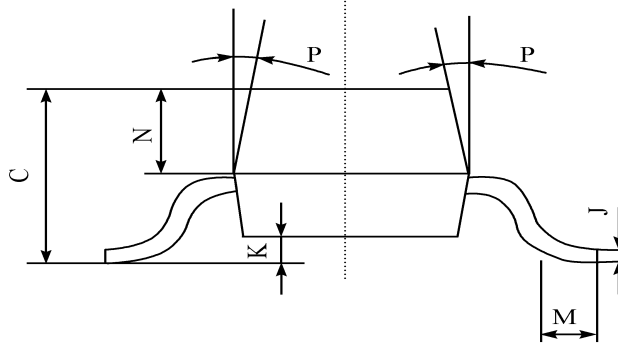
Characteristic 特性參數	Symbol 符號	Min 最小值	Typ 典型值	Max 最大值	Unit 單位
Emitter Cutoff Current 發射極截止電流($V_{EB}=3.0\text{v}, I_C=0$)	I_{EBO}	—	—	0.5	μA
Collector Cutoff Current 集電極截止電流($V_{CB}=20\text{v}, I_E=0$)	I_{CBO}	—	—	0.5	μA
Collector-Base Breakdown Voltage 集電極基極擊穿電壓($I_C=100\mu\text{A}$)	$V_{(BR)CBO}$	30	—	—	V
Collector-Emitter Breakdown Voltage 集電極發射極擊穿電壓($I_C=1\text{mA}$)	$V_{(BR)CEO}$	20	—	—	V
Emitter-Base Breakdown Voltage 發射極基極擊穿電壓($I_E=100\mu\text{A}$)	$V_{(BR)EBO}$	4	—	—	V
Collector Saturation Voltage 集電極飽和壓降($I_C=10\text{mA}, I_B=1\text{mA}$)	$V_{CE(sat)}$	—	—	0.6	Vdc
DC Current Gain 直流電流增益 ($V_{CE}=5.0\text{v}, I_C=1.0\text{mA}$)	H_{FE}	40	—	200	
Gain Bandwidth Product 增益帶寬乘積($V_{CE}=5.0\text{v}, I_C=10\text{mA}$)	f_T	600	800	1100	MHz
Noise Figure 噪声係數 ($V_{CE}=6\text{V}, I_C=0.1\text{mA}, f=1\text{kHz}, R_g=10\text{k}\Omega$)	NF	—	—	1.0	dB
Output Capacitance 輸出電容 ($V_{CB}=10\text{v}, I_E=0, f=1.0\text{MHz}$)	C_{ob}	—	1.2	1.5	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	$7 \pm 2^\circ$



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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