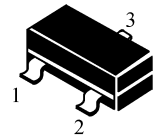


# KEL<sup>®</sup>

S9012

SOT-23

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



## ■FEATURES 特點

Excellent  $H_{FE}$  Linearity  $H_{FE}$  線性特性極好  
 $h_{FE}(2)=25(\text{Min.})$  at  $V_{CE}=6V, I_c=400\text{mA}$ .  
Complementary to S9013 与 S9013 互补

## ■MAXIMUM RATINGS 最大額定值( $T_a=25^\circ\text{C}$ )

Characteristic 特性參數	Symbol 符號	Rating 額定值	Unit 單位
Collector-Base voltage 集電極-基極電壓	$V_{CBO}$	-40	Vdc
-Collector-Emitter Voltage 集電極-發射極電壓	$V_{CEO}$	-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	$I_c$	-500	mAdc
Base-Current 基極電流	$I_B$	-50	mAdc
Collector Power Dissipation 集電極耗散功率	$P_C$	300	mW
Junction Temperature 結溫	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range 儲存溫度	$T_{stg}$	-55~150	$^\circ\text{C}$

## ■DEVICE MARKING 打標

S9012 = 2T1

KEL S9012



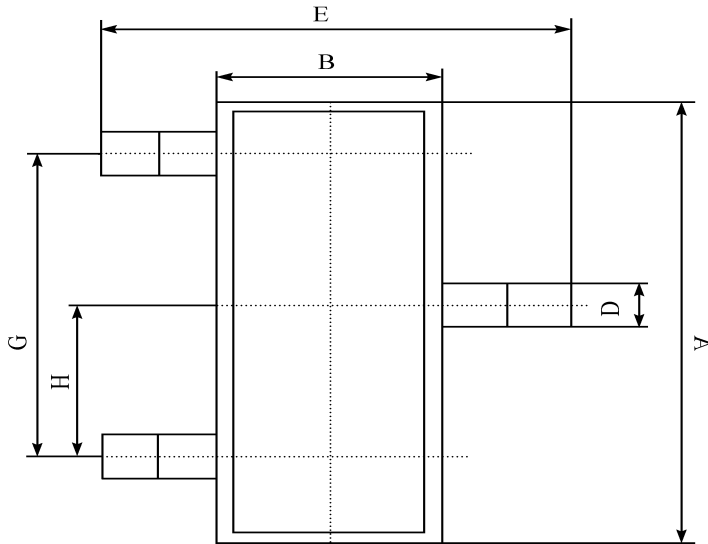
S9012

**■ELECTRICAL CHARACRTERISTICS 電特性**

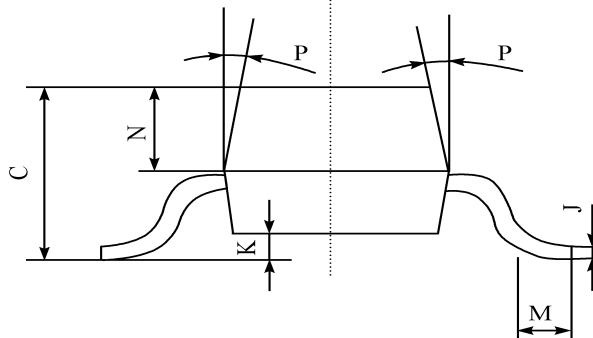
**( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如無特殊說明，溫度為  $25^{\circ}\text{C}$ )**

Characteristic 特性參數	Symbol 符號	Test Condition 測試條件	Min 最小值	TYP 典型值	Max 最大值	Unit 單位
Collector Cutoff Current 集電極截止電流	$I_{CBO}$	$V_{CB} = -35\text{V}, I_E = 0$	—	—	-0.1	$\mu\text{A}$
Emitter Cutoff Current 發射極截止電流	$I_{EBO}$	$V_{EB} = -5\text{V}, I_C = 0$	—	—	-0.1	$\mu\text{A}$
Collect-Base Breakdown Voltage 集電極-基極擊穿電壓	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}$	-40	—	—	V
Collect-Base Breakdown Voltage 集電極-基極擊穿電壓	$V_{(BR)CEO}$	$I_C = -1.0\text{mA}$	-30	—	—	V
Emitter-Base Breakdown Voltage 發射極-基極擊穿電壓	$V_{(BR)EBO}$	$I_E = -100\mu\text{A}$	-5	—	—	V
DC Current Gain 直流電流增益	$h_{FE}(1)$	$V_{CE} = -1\text{V}, I_C = -100\text{mA}$	70	—	400	—
	$h_{FE}(2)$	$V_{CE} = -6\text{V}, I_C = -400\text{mA}$	25	—	—	
Collector-Emitter Saturation Voltage 集電極-發射極飽和壓降	$V_{CE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$	—	—	-0.6	V
Base-Emitter Saturation Voltage 基極-發射極電壓	$V_{BE}$	$V_{CE} = -1\text{V}, I_C = -100\text{mA}$	—	-0.8	-1.0	V
Transition Frequency 特徵頻率	$f_T$	$V_{CE} = -6\text{V}, I_C = -20\text{mA}$	150	300	—	MHz
Collector Output Capacitance 輸出電容	$C_{ob}$	$V_{CB} = -6\text{V}, I_E = 0, f = 1\text{MHz}$	—	7.0	10	pF

## ■DIMENSION 外形封裝尺寸



序號	數值及公差
A	$2.90 \pm 0.10$
B	$1.30 \pm 0.10$
C	$1.00 \pm 0.10$
D	$0.40 \pm 0.10$
E	$2.40 \pm 0.20$
G	$1.90 \pm 0.10$
H	$0.95 \pm 0.05$
J	$0.13 \pm 0.05$
K	$0.00 - 0.10$
M	$\geq 0.2$
N	$0.60 \pm 0.10$
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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