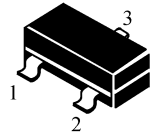


# KEL<sup>®</sup>

BC807-16 BC807-25 BC807-40

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	$V_{CEO}$	-45	Vdc
Collector-Base Voltage 集電極-基極電壓	$V_{CBO}$	-50	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

## ■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) $T_A=25^{\circ}\text{C}$ 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

BC807-16=5A;BC807-25=5B; BC807-40=5C

KEL BC807



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**■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	Max 最大值	Unit 單位
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**■OFF CHARACTERISTICS 截止電特性**

Collector-Emitter Breakdown Voltage 集電極發射極擊穿電壓( $I_c = -10\text{mA}$ , $I_B = 0$ )	$V_{(BR)CEO}$	-45	—	Vdc
Collector-Base Breakdown Voltage 集電極基極擊穿電壓( $I_c = -10\mu\text{A}$ , $V_{EB} = 0$ )	$V_{(BR)CBS}$	-50	—	Vdc
Emitter-Base Breakdown Voltage 發射極基極擊穿電壓( $I_E = -1.0\mu\text{A}$ , $I_c = 0$ )	$V_{(BR)EBO}$	-5.0	—	Vdc
Collector Cutoff Current 集電極截止電流( $V_{CB} = -20\text{V}$ ) ( $V_{CB} = -20\text{Vdc}$ , $T_A = 150^{\circ}\text{C}$ )	$I_{CBO}$	— —	-100 -5.0	nA uA

**■ON CHARACTERISTICS 導通電特性**

Characteristic 特性參數	Symbol 符號	Min 最小值	Typ 典型值	Max 最大值	Unit 單位
DC Current Gain 直流電流增益	$H_{FE}$				—
( $I_c = -100\text{mA}$ , $V_{CE} = -1.0\text{Vdc}$ )	BC807-16 BC807-25 BC807-40	100 160 250	— — —	250 400 600	
( $I_c = -500\text{mA}$ , $V_{CE} = -1.0\text{Vdc}$ )		40	—	—	
Collector-Emitter Saturation Voltage 集電極-發射極飽和壓降 ( $I_c = -500\text{mA}$ , $I_B = -50\text{mA}$ )	$V_{CE(sat)}$	—	—	-0.7	Vdc
Base-Emitter Voltage 基極-發射極電壓 ( $I_c = -500\text{mA}$ , $V_{CE} = -1.0\text{Vdc}$ )	$V_{BE(on)}$	—	—	-1.2	V

**■SMALL-SIGNAL CHARACTERISTICS 小信號特性**

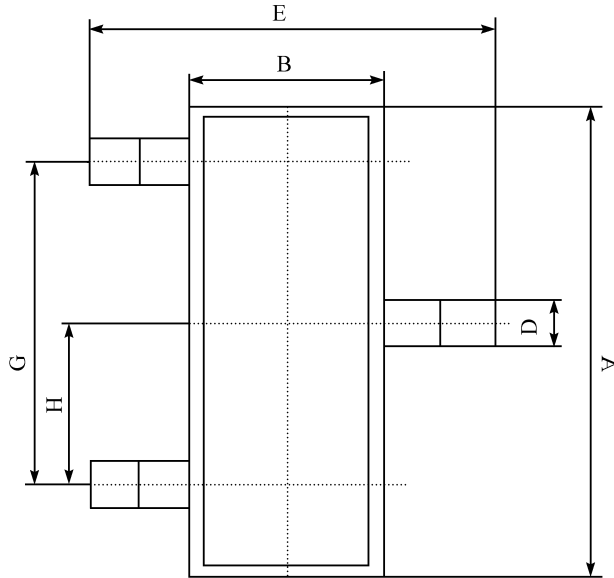
Current-Gain-Bandwidth Product 電流增益-帶寬乘積 ( $I_c = -10\text{mA}$ , $V_{CE} = -5.0\text{Vdc}$ , $f = 100\text{MHz}$ )	$f_T$	100	—	—	MHz
Output Capacitance 輸出電容( $V_{CB} = -10\text{Vdc}$ , $f = 1.0\text{MHz}$ )	$C_{obo}$	—	10	—	pF

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

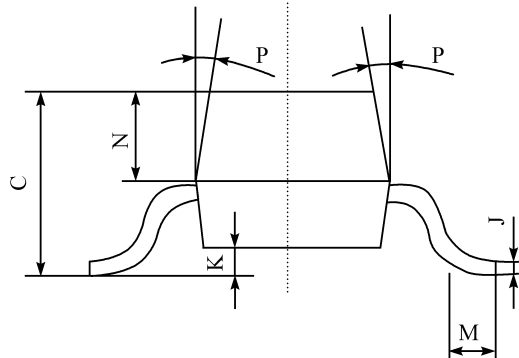


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■DIMENSION 外形封裝尺寸



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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