

■ 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°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

BC817-16=6A; BC817-25=6B; BC817-40=6C



BC817-16 BC817-25 BC817-40

■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	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}				—
($I_c=100\text{mA}$, $V_{CE}=1.0\text{Vdc}$)	BC817-16 BC817-25 BC817-40	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

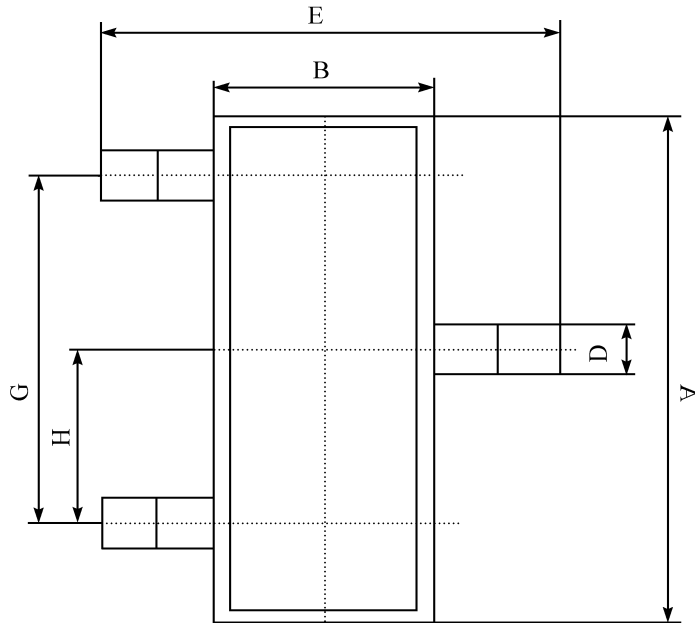
Current-Gain-Bandwidth Product 電流增益-帶寬乘積 ($I_c=10\text{mA}$, $V_{CE}=5.0\text{Vdc}$, $f=100\text{MHz}$)	f_T	100	—	—	MHz
Output Capacitance 輸出電容($V_{CB}=10\text{Vdc}$, $f=1.0\text{MHz}$)	C_{obo}	—	10	—	pF

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

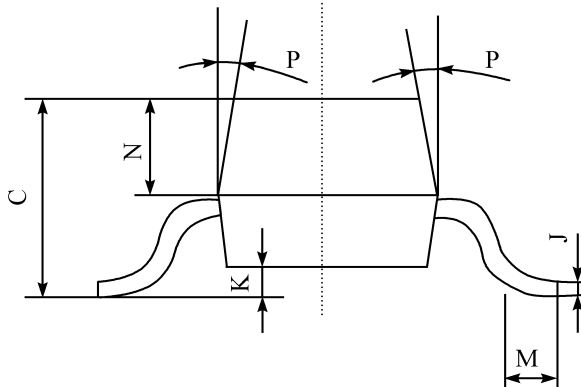


BC817-16 BC817-25 BC817-40

■ 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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