



2SB817C

Bipolar Transistor -140V, -12A, Low $V_{CE(sat)}$ PNP TO-3P-3L

ON Semiconductor®

<http://onsemi.com>

Features

- Large current capacitance
- Wide SOA and high durability against breakdown
- Adoption of MBIT process

Specifications

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

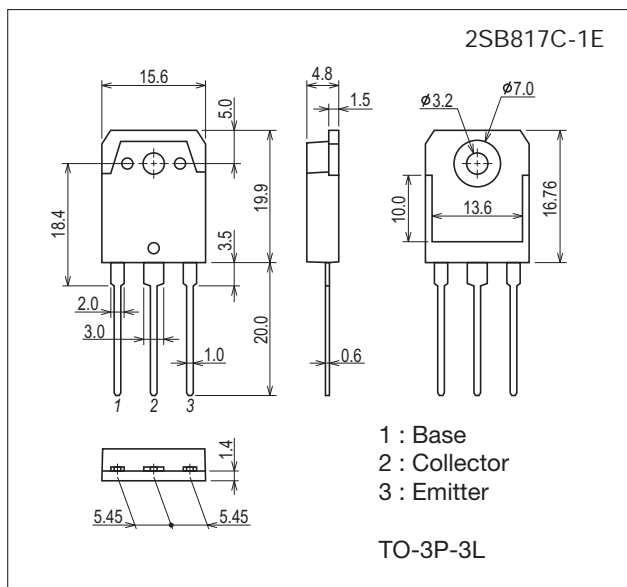
Parameter	Symbol	Conditions	Ratings	Unit
Collector to Base Voltage	V_{CBO}		-160	V
Collector to Emitter Voltage	V_{CEO}		-140	V
Emitter to Base Voltage	V_{EBO}		-6	V
Collector Current	I_C		-12	A
Collector Current (Pulse)	I_{CP}		-20	A
Collector Dissipation	P_C		2.5	W
		$T_c=25^\circ\text{C}$	120	W
Junction Temperature	T_j		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Package Dimensions

unit : mm (typ)

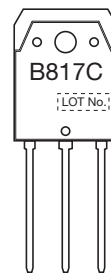
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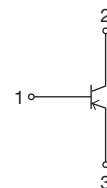
Product & Package Information

- Package : TO-3P-3L
- JEITA, JEDEC : SC-65, TO-247, SOT-199
- Minimum Packing Quantity : 30 pcs./tube

Marking



Electrical Connection

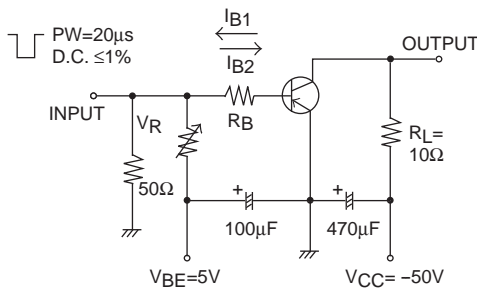


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Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	V _{CB} =-160V, I _E =0A			-0.1	mA
Emitter Cutoff Current	I _{EBO}	V _{EB} =-4V, I _C =0A			-0.1	mA
DC Current Gain	h _{FE1}	V _{CE} =-5V, I _C =-1A	100		200	
	h _{FE2}	V _{CE} =-5V, I _C =-5A	35			
Gain-Bandwidth Product	f _T	V _{CE} =-5V, I _C =-1A		10		MHz
Output Capacitance	C _{ob}	V _{CB} =-10V, f=1MHz		280		pF
Base to Emitter Voltage	V _{BE}	V _{CE} =-5V, I _C =-5A			-1.5	V
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C =-5A, I _B =-0.5A		-0.3	-2.0	V
Collector to Base Breakdown Voltage	V _{(BR)CBO}	I _C =-5mA, I _E =0A	-160			V
Collector to Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =-50mA, R _{BE} =∞	-140			V
Emitter to Base Breakdown Voltage	V _{(BR)EBO}	I _E =-5mA, I _C =0A	-6			V
Turn-ON Time	t _{on}	See specified Test Circuit.		0.45		μs
Storage Time	t _{stg}			1.75		μs
Fall Time	t _f			0.25		μs

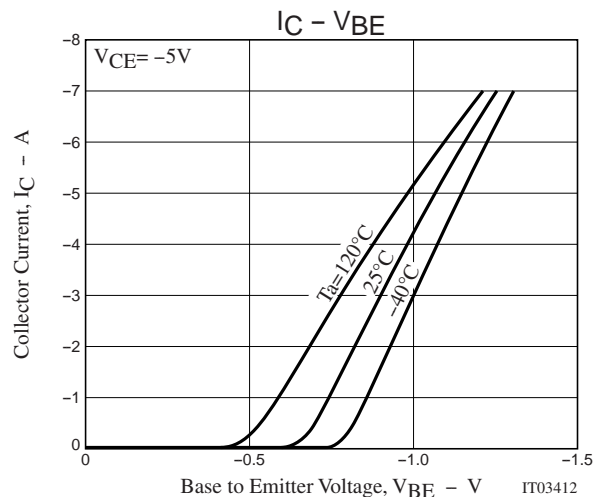
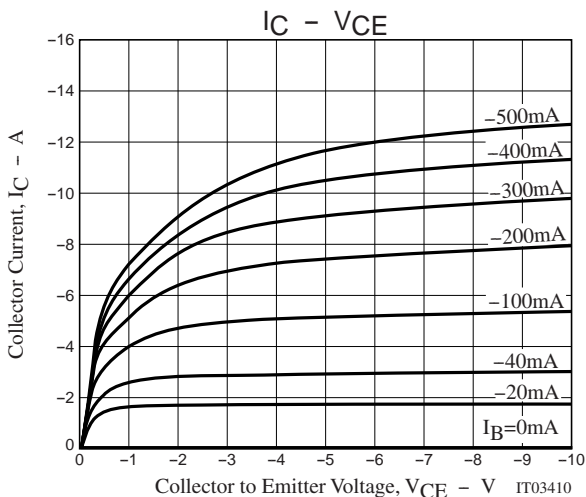
Switching Time Test Circuit



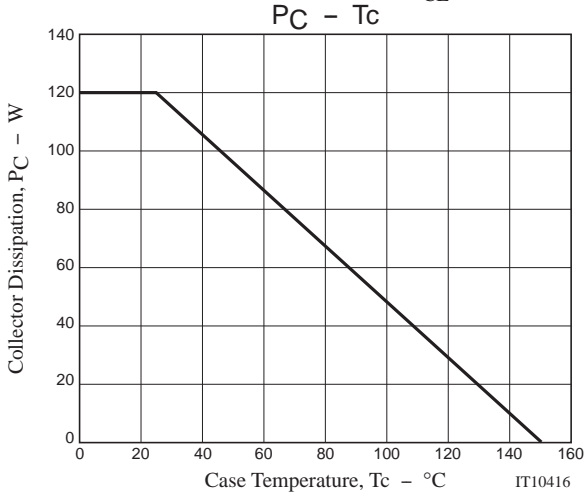
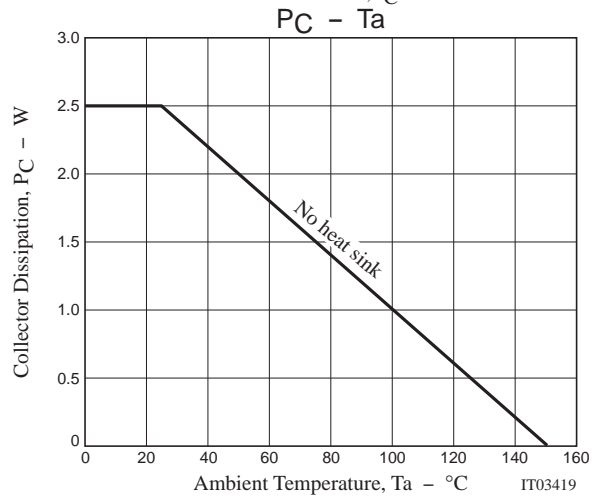
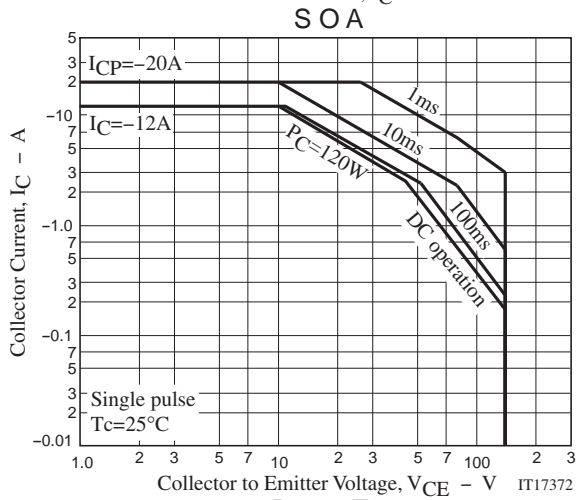
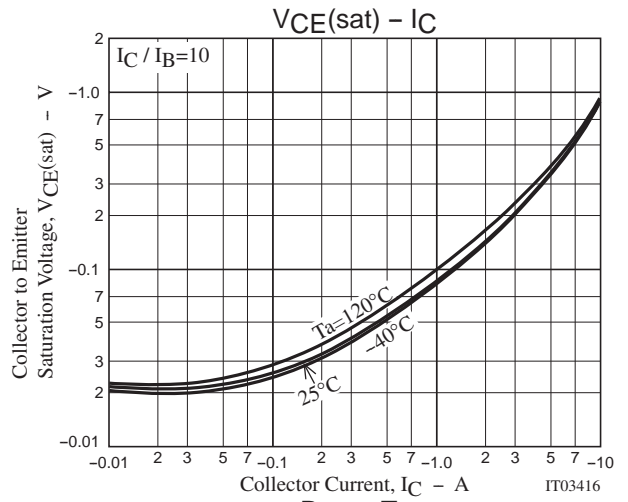
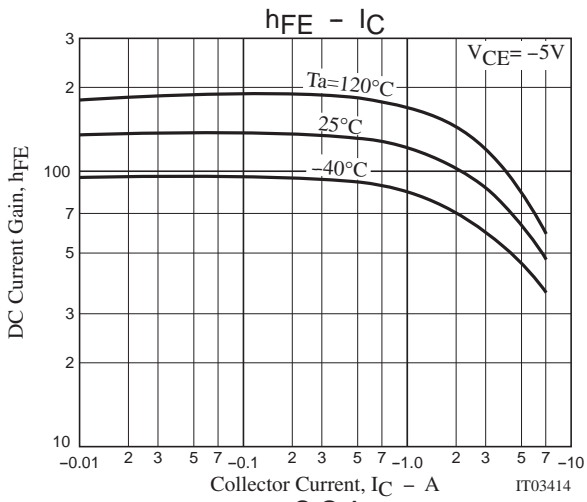
$$I_C = -10I_{B1} = 10I_{B2} = -5A$$

Ordering Information

Device	Package	Shipping	memo
2SB817C-1E	TO-3P-3L	30pcs./tube	Pb-Free



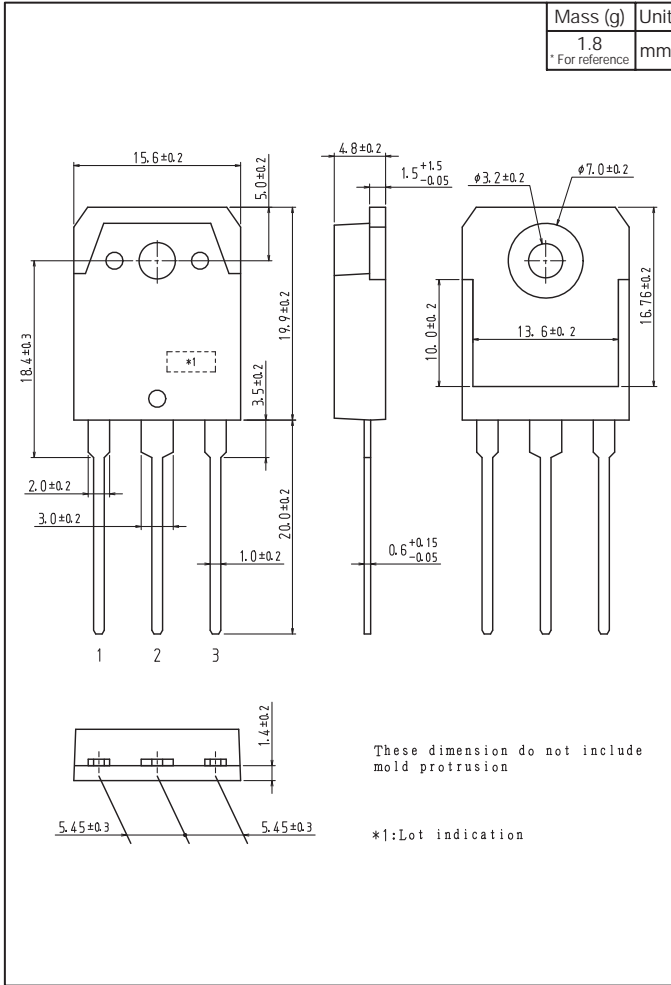
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Outline Drawing



2SB817C-1E



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