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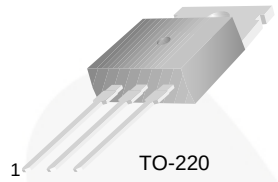
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November 2014

TIP30C
PNP Epitaxial Silicon Transistor

Features

- Medium Power Linear Switching Applications
- Complementary to TIP29 Series



TO-220

1.Base 2.Collector 3.Emitter

Ordering Information

Part Number	Top Mark	Package	Packing Method
TIP30C	TIP30C	TO-220 3L (Single Gauge)	Bulk
TIP30CTU	TIP30C	TO-220 3L (Single Gauge)	Rail

Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at T_C = 25°C unless otherwise noted.

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-100	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current (DC)	-1	A
I_{CP}	Collector Current (Pulse)	-3	A
I_B	Base Current	-0.4	A
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature Range	-65 to 150	°C

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Thermal Characteristics

Values are at T_C = 25°C unless otherwise noted.

Symbol	Parameter	Value	Unit
P_C	Collector Dissipation (T_A = 25°C)	2	W
	Collector Dissipation (T_C = 25°C)	30	

Electrical Characteristics

Values are at T_C = 25°C unless otherwise noted.

Symbol	Parameter	Conditions	Min.	Max.	Unit
V_{CEO}(sus)	Collector-Emitter Sustaining Voltage(1)	I_C = -30 mA, I_B = 0	-100		V
I_{CEO}	Collector Cut-Off Current	V_{CE} = -60 V, I_B = 0		-0.3	mA
I_{CES}	Collector Cut-Off Current	V_{CE} = -100 V, V_{EB} = 0		-200	µA
I_{EBO}	Emitter Cut-Off Current	V_{EB} = -5 V, I_C = 0		-1.0	mA
h_{FE}	DC Current Gain(1)	V_{CE} = -4 V, I_C = -0.2 A	40		
		V_{CE} = -4 V, I_C = -1 A	15	75	
V_{CE}(sat)	Collector-Emitter Saturation Voltage(1)	I_C = -1 A, I_B = -125 mA		-0.7	V
V_{BE}(on)	Base-Emitter On Voltage(1)	V_{CE} = -4 V, I_C = -1 A		-1.3	V
f_T	Current Gain Bandwidth Product	V_{CE} = -10 V, I_C = -200 mA, f = 1 MHz	3.0		MHz

Note:

1. Pulse test: pw ≤ 300 µs, duty cycle ≤ 2%.

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Typical Performance Characteristics

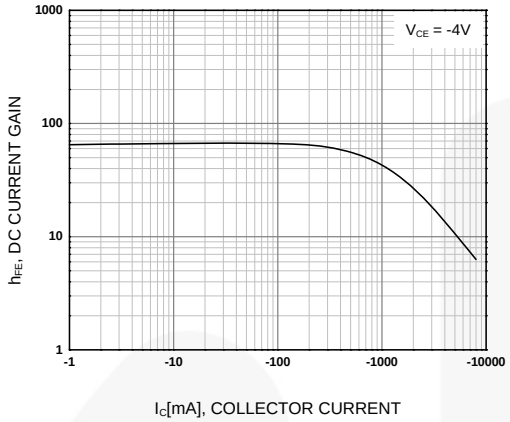


Figure 1. DC Current Gain

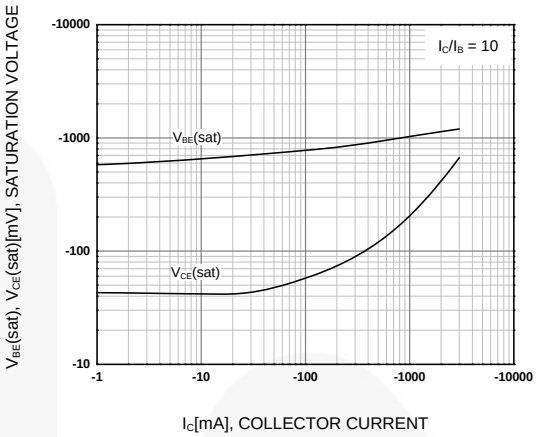


Figure 2. Base-Emitter Saturation Voltage and Collector-Emitter Saturation Voltage

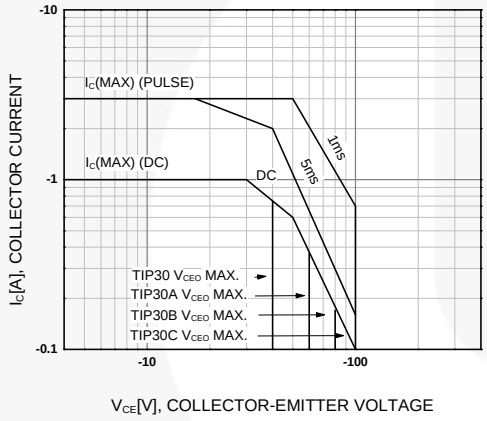


Figure 3. Safe Operating Area

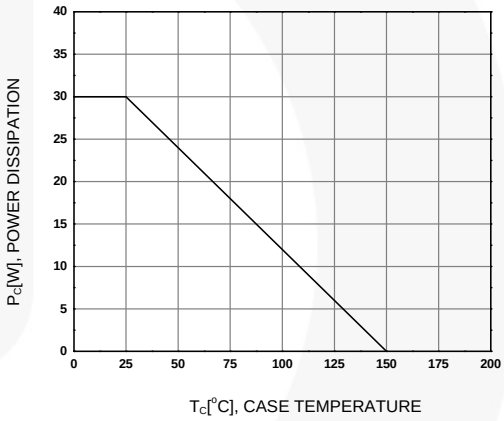


Figure 4. Power Derating

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Physical Dimensions

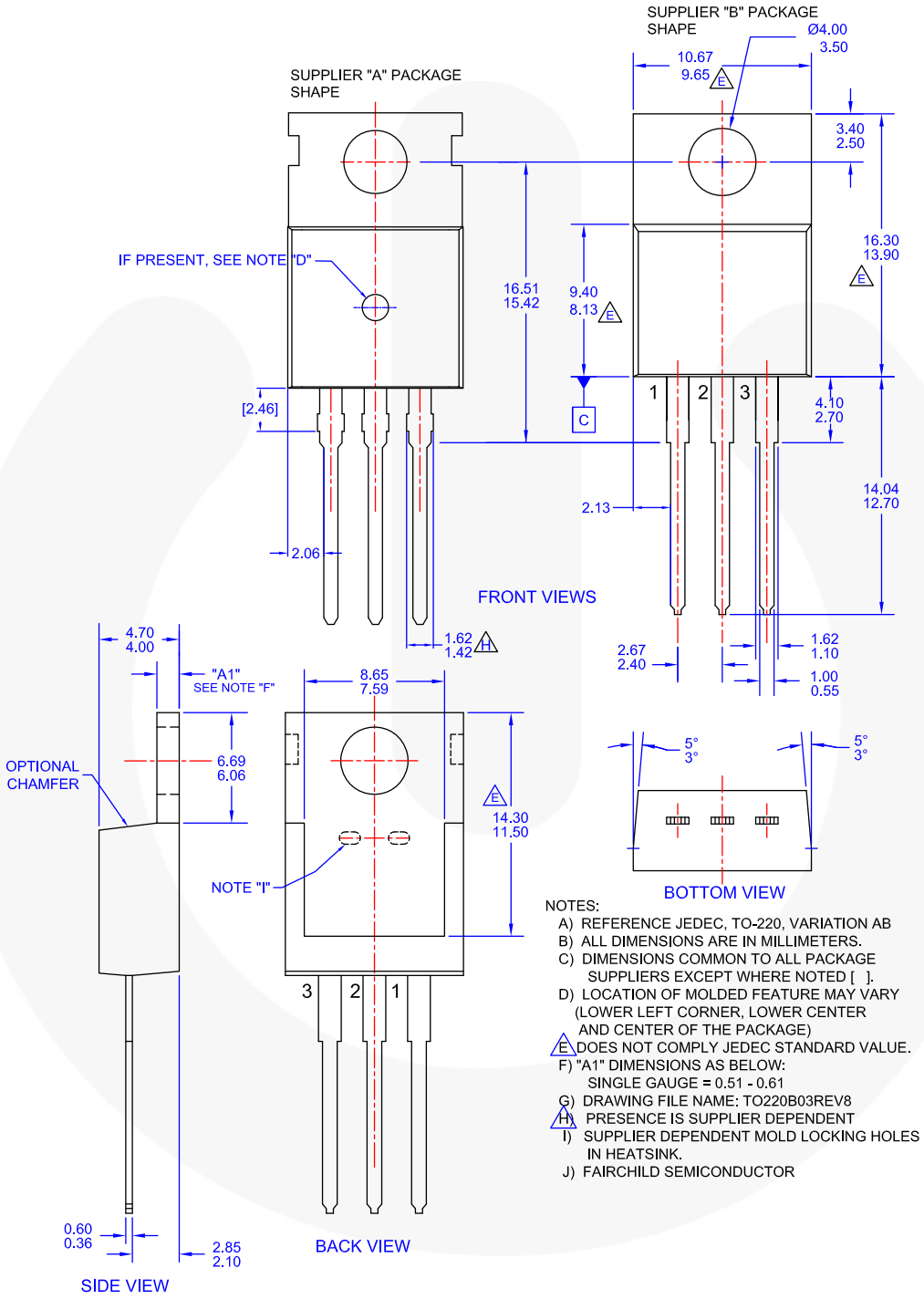


Figure 5. TO-220, MOLDED, 3LEAD, JEDEC VARIATION AB

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No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
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