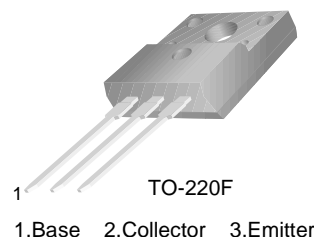


## FJPF9020

### Monolithic Construction With Built In Base-Emitter Shunt Resistors

- High Collector-Base Breakdown Voltage :  $BV_{CBO} = -550V$
- High DC Current Gain :  $h_{FE} = 550$  @  $V_{CE} = -4V, I_C = -1A$  (Typ.)
- Industrial Use

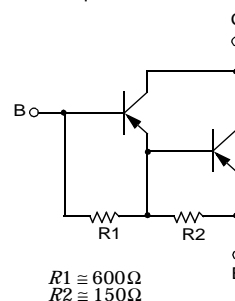


### PNP Epitaxial Darlington Transistor

#### Absolute Maximum Ratings $T_C=25^\circ C$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	- 550	V
$V_{CEO}$	Collector-Emitter Voltage	- 550	V
$V_{EBO}$	Emitter-Base Voltage	- 6	V
$I_C$	Collector Current (DC)	- 2	A
$I_{CP}$	Collector Current (Pulse)	- 4	A
$P_C$	Collector Dissipation ( $T_C=25^\circ C$ )	15	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{STG}$	Storage Temperature	- 55 ~ 150	$^\circ C$

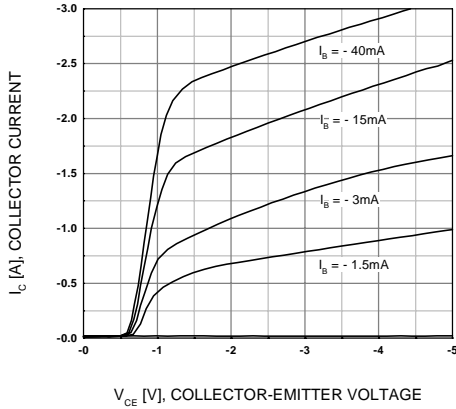
Equivalent Circuit



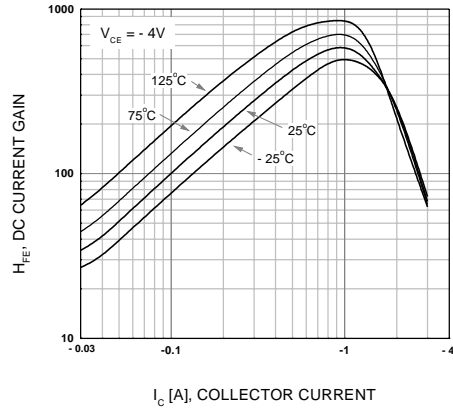
#### Electrical Characteristics $T_C=25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = -100\mu A, I_E = 0$	- 550			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -500\mu A, I_B = 0$	- 550			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = -200mA, I_C = 0$	-6			V
$I_{CBO}$	Collector Cut-off Current	$V_{CE} = -550V, I_E = 0$			-100	$\mu A$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = -6V, I_C = 0$		-10	-20	mA
$h_{FE}$	DC Current Gain	$V_{CE} = -4V, I_C = -1A$	400	550	700	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -1A, I_B = -20mA$		-1.0	- 1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -1A, I_B = -20mA$		-1.5	- 2.0	V

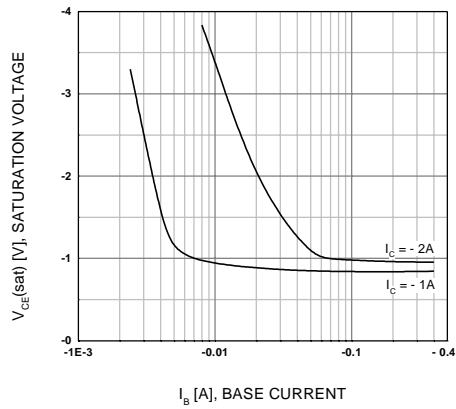
# Typical Characteristics



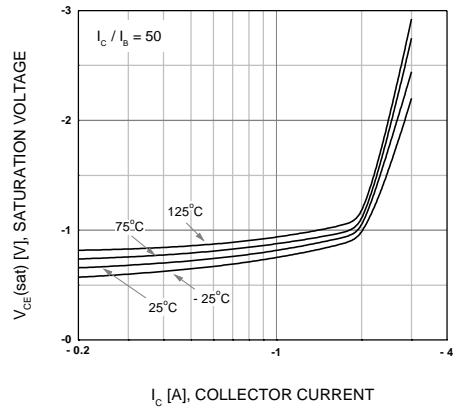
**Figure 1. Static Characteristic**



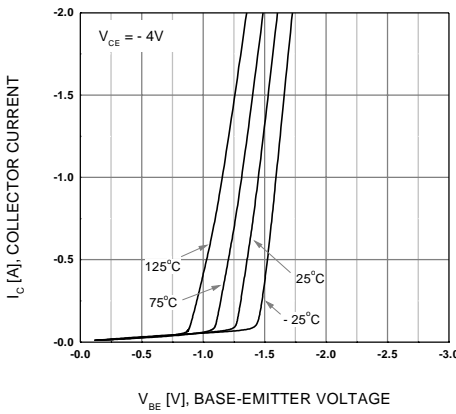
**Figure 2. DC current Gain**



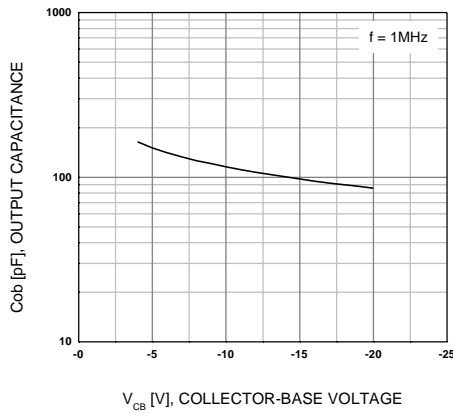
**Figure 3.  $V_{CE(sat)}$  vs.  $I_b$  Characteristics**



**Figure 4. Collector-Emitter Saturation Voltage**



**Figure 5. Base-Emitter On Voltage**



**Figure 6. Output Capacitance**

Typical Characteristics (Continued)

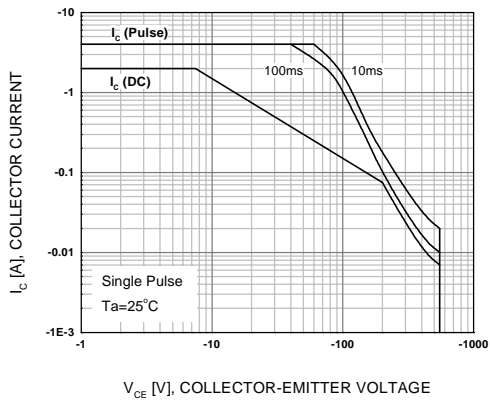


Figure 7. Forward Bias Safe Operating Area

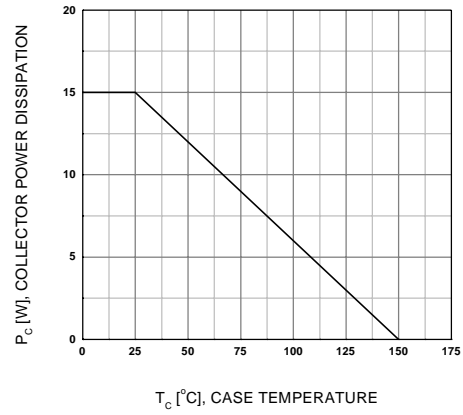


Figure 8. Power Derating

# Package Dimensions

FJPF9020

## TO-220F



Dimensions in Millimeters

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