

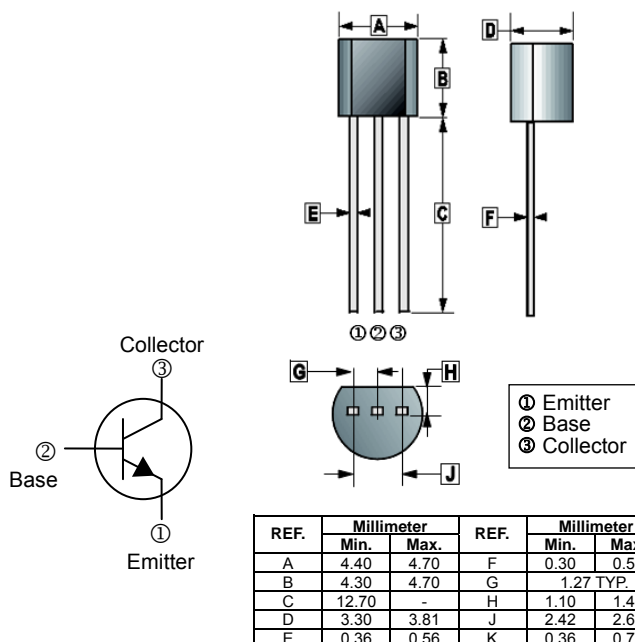
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

## FEATURES

High Voltage NPN Transistor

### TO-92



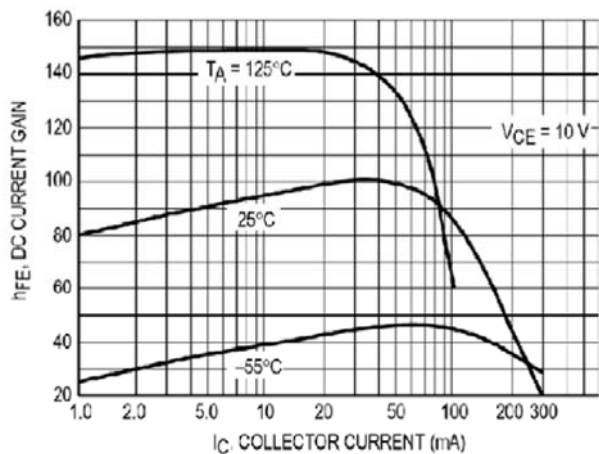
## ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	RATING	UNIT
Collector to Base Voltage	$V_{CBO}$	400	V
Collector to Emitter Voltage	$V_{CEO}$	400	V
Emitter to Base Voltage	$V_{EBO}$	5	V
Collector Current - Continuous	$I_C$	0.2	A
Collector Current - Pulsed	$I_{CM}$	0.3	A
Collector Power Dissipation	$P_C$	625	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	200	$^\circ\text{C}/\text{W}$
Junction, Storage Temperature	$T_J, T_{STG}$	150, -55~150	$^\circ\text{C}$

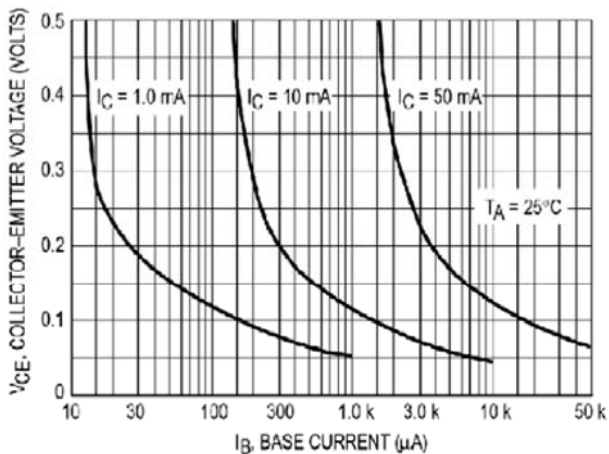
## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITION
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	400	-	-	V	$I_C=100\mu\text{A}, I_E=0$
Collector to Emitter Breakdown Voltage <sup>1</sup>	$V_{(BR)CEO}$	400	-	-	V	$I_C=1\text{mA}, I_B=0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	5	-	-	V	$I_E=100\mu\text{A}, I_C=0$
Collector Cut-Off Current	$I_{CBO}$	-	-	0.1	$\mu\text{A}$	$V_{CB}=400\text{V}, I_E=0$
Collector Cut-Off Current	$I_{CEO}$	-	-	5	$\mu\text{A}$	$V_{CB}=400\text{V}, I_B=0$
Emitter Cut-Off Current	$I_{EBO}$	-	-	0.1	$\mu\text{A}$	$V_{EB}=4\text{V}, I_C=0$
DC Current Gain	$h_{FE(1)}$	80	-	300		$V_{CE}=10\text{V}, I_C=10\text{mA}$
	$h_{FE(2)}$	70	-	-		$V_{CE}=10\text{V}, I_C=1\text{mA}$
	$h_{FE(3)}$	40	-	-		$V_{CE}=10\text{V}, I_C=100\text{mA}$
	$h_{FE(4)}$	80	-	-		$V_{CE}=10\text{V}, I_C=50\text{mA}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	-	-	0.2	V	$I_C=10\text{mA}, I_B=1\text{mA}$
	$V_{CE(sat)(2)}$	-	-	0.3		$I_C=50\text{mA}, I_B=5\text{mA}$
Base to Emitter Voltage	$V_{BE(sat)}$	-	-	0.75	V	$I_C=10\text{mA}, I_B=1\text{mA}$
	$f_T$	50	-	-	MHz	$V_{CE}=20\text{V}, I_C=10\text{mA}, f=30\text{MHz}$

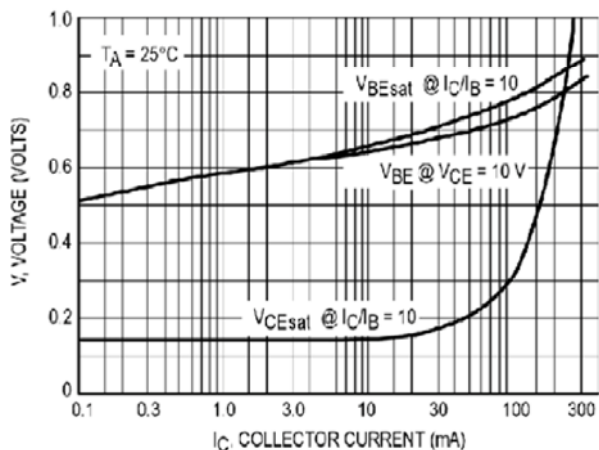
**CHARACTERISTIC CURVES**



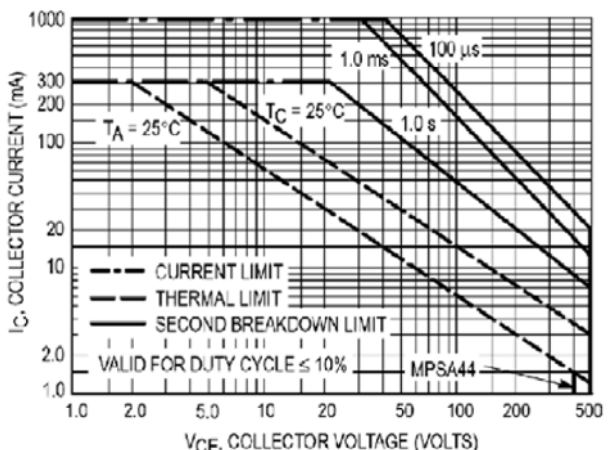
**DC Current Gain**



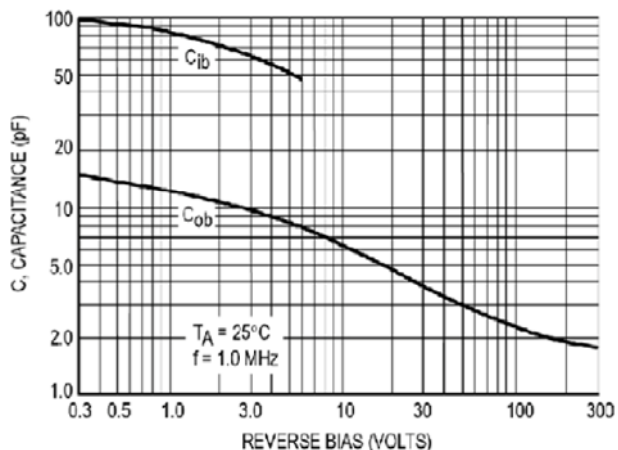
**Collector Saturation Region**



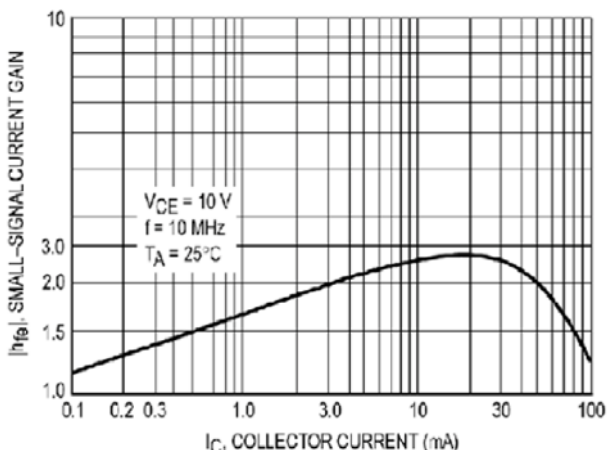
**"On" Voltages**



**Active Region — Safe Operating Area**



**Capacitance**



**High Frequency Current Gain**