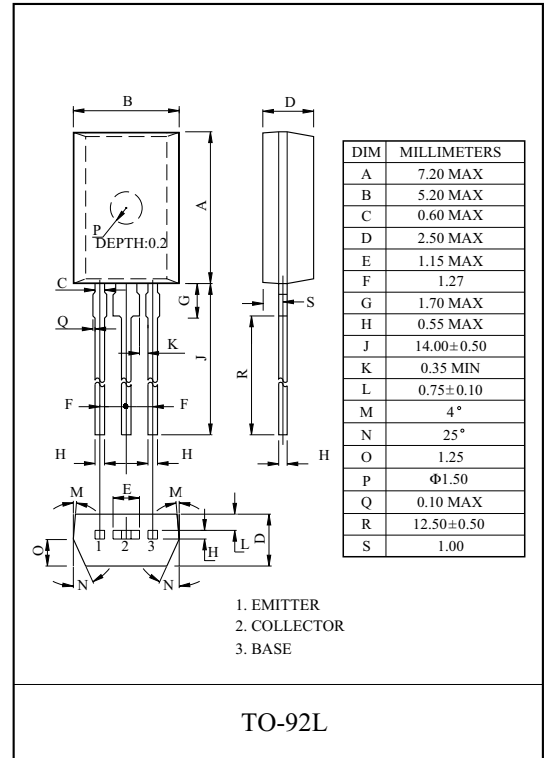


### FEATURE

- Low Collector-Emitter Saturation Voltage  $V_{CE(sat)}$ .
- High Collector Current Capability :  $I_C$  and  $I_{CP}$ .
- Higher Efficiency Leading to Less Heat Generation.

### MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CBO}$	120	V
Collector-Emitter Voltage		$V_{CEO}$	100	V
Emitter-Base Voltage		$V_{EBO}$	5	V
Collector Current	DC	$I_C$	1	A
	Pulse	$I_{CP}$	3	
Base Current		$I_B$	300	mA
Collector Power Dissipation		$P_C$	1	W
Junction Temperature		$T_j$	150	°C
Storage Temperature Range		$T_{stg}$	-55 ~ 150	°C

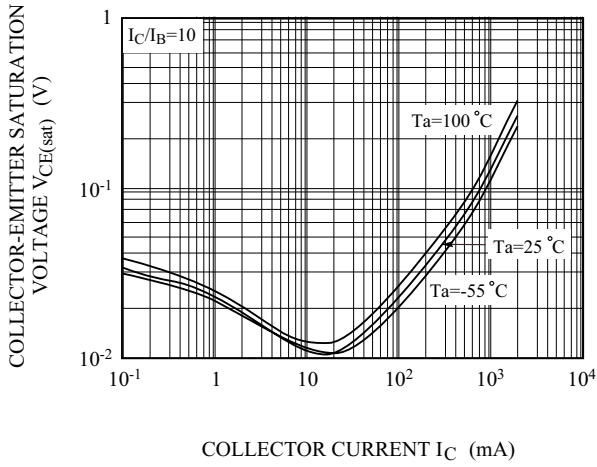


### ELECTRICAL CHARACTERISTICS (Ta=25°C)

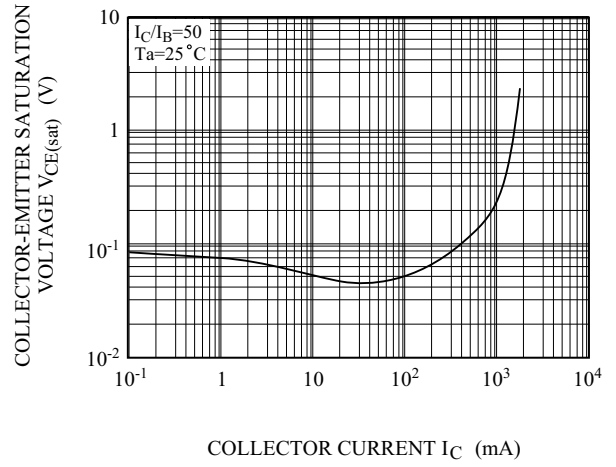
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=100\mu A$	120	-	-	V
Collector-Emitter Breakdown Voltage **	$V_{(BR)CEO}$	$I_C=1mA$	100	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=100\mu A$	5	-	-	V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=80V$	-	-	100	nA
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=4V, I_C=0A$	-	-	100	nA
Collector-Emitter Cut-Off Current	$I_{CES}$	$V_{CES}=80V, V_{BE}=0V$	-	-	100	nA
Collector-Emitter Saturation Voltage **	$V_{CE(sat)}(1)$	$I_C=100mA, I_B=10mA$	-	-	0.04	V
	$V_{CE(sat)}(2)$	$I_C=500mA, I_B=50mA$	-	-	0.12	
	$V_{CE(sat)}(3)$	$I_C=1A, I_B=100mA$	-	-	0.2	
Base-Emitter Saturation Voltage **	$V_{BE(sat)}$	$I_C=1A, I_B=100mA$	-	-	1.05	V
Base-Emitter Voltag	$V_{BE}$	$V_{CE}=10V, I_C=1A$	-	-	0.9	V
DC Current Gain **	$h_{FE}(1)$	$V_{CE}=10V, I_C=1mA$	150	-	-	
	$h_{FE}(2)$	$V_{CE}=10V, I_C=250mA$	150	-	500	
	$h_{FE}(3)$	$V_{CE}=10V, I_C=500mA$	100	-	-	
	$h_{FE}(4)$	$V_{CE}=10V, I_C=1A$	80	-	-	
Transition Frequency	$f_T$	$V_{CE}=10V, I_C=50mA, f=100MHz$	100	-	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V, f=1MHz$	-	9.5	-	pF

\*\* Pulse Width = 300 $\mu$ s, Duty Cycle ≤2%.

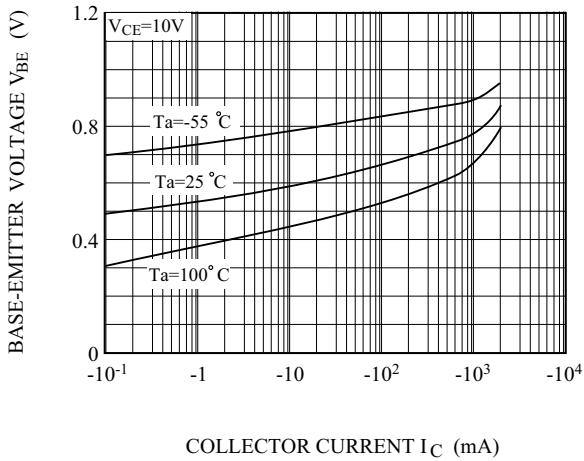
$V_{CE(sat)} - I_C$



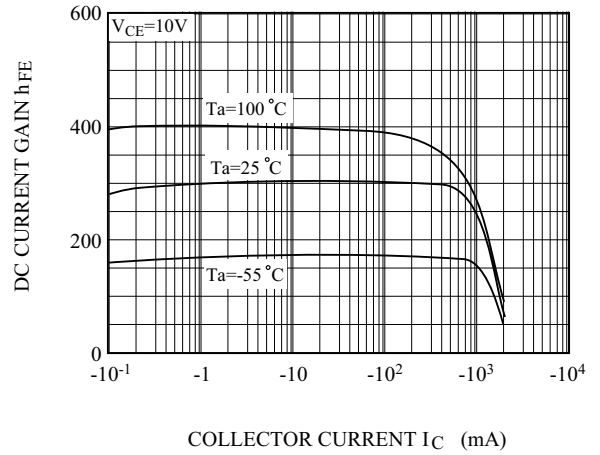
$V_{CE(sat)} - I_C$



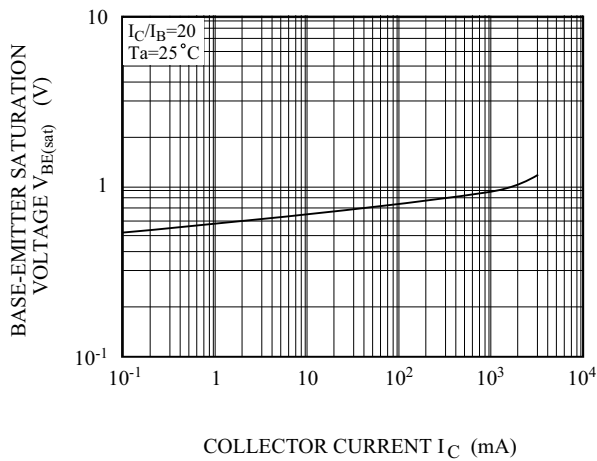
$V_{BE} - I_C$



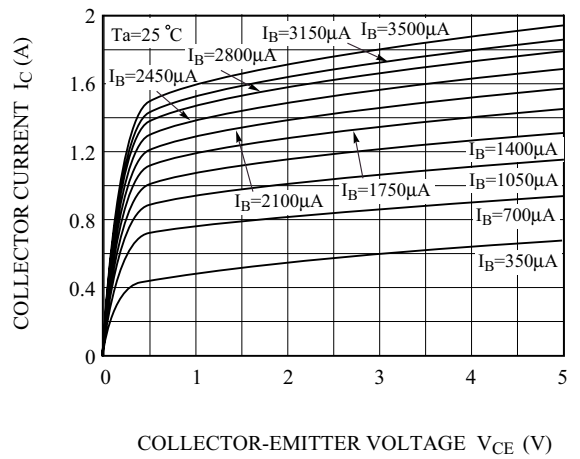
$h_{FE} - I_C$



$V_{BE(sat)} - I_C$



$I_C - V_{CE}$



## SAFE OPERATING AREA

