

TO-92L Plastic-Encapsulate Transistors

2SC1383 2SC1384

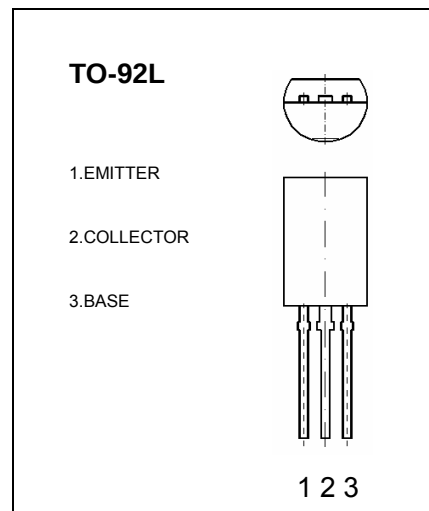
TRANSISTOR (NPN)

FEATURES

- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- Complementary pair with 2SA0683 and 2SA0684.

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

Symbol	Parameter	2SC1383	2SC1384	Units
V_{CBO}	Collector-Base Voltage	30	60	V
V_{CEO}	Collector-Emitter Voltage	25	50	V
V_{EBO}	Emitter-Base Voltage	5		V
I_C	Collector Current –Continuous	1		A
P_C	Collector Power Dissipation	1		W
T_J	Junction Temperature	150		$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150		$^{\circ}\text{C}$



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

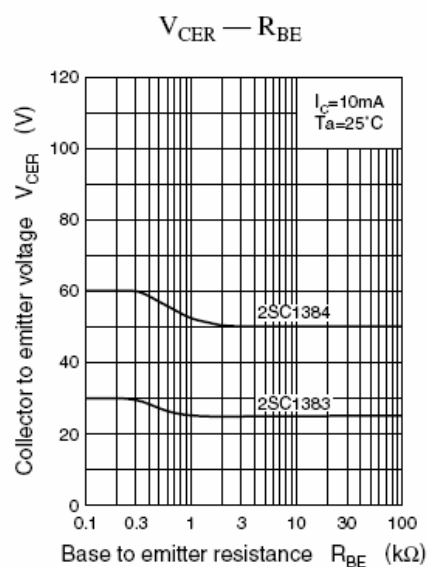
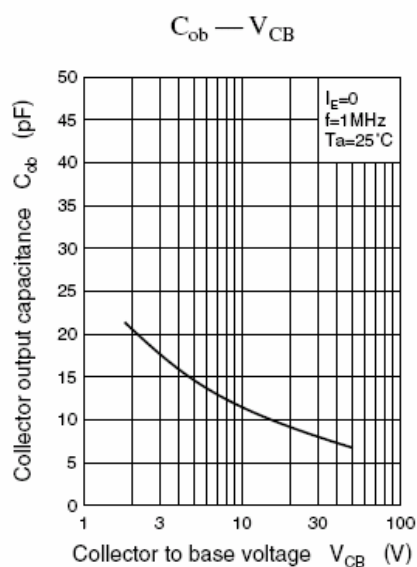
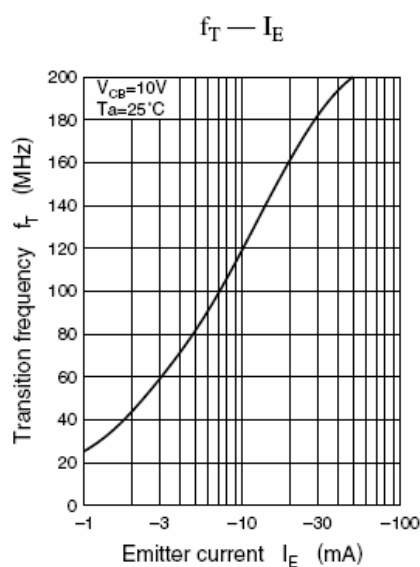
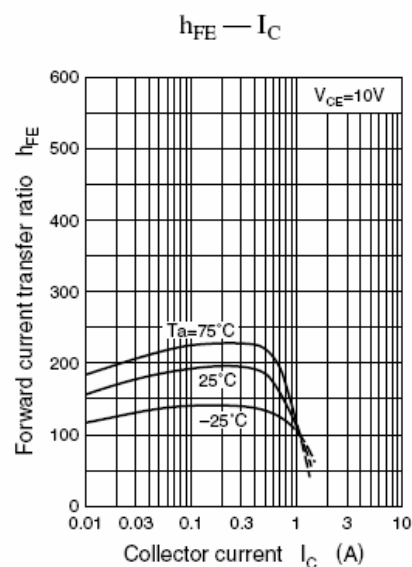
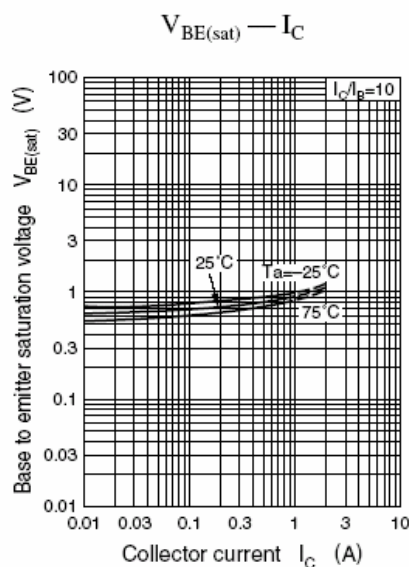
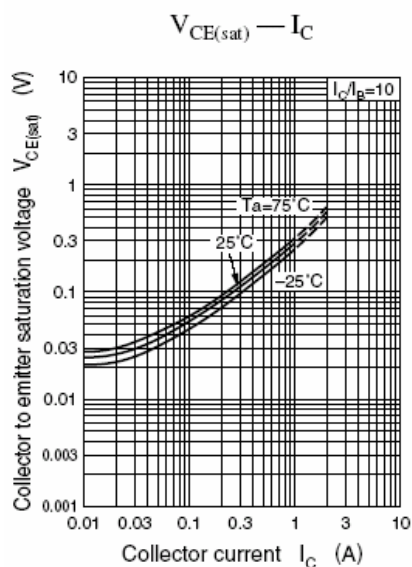
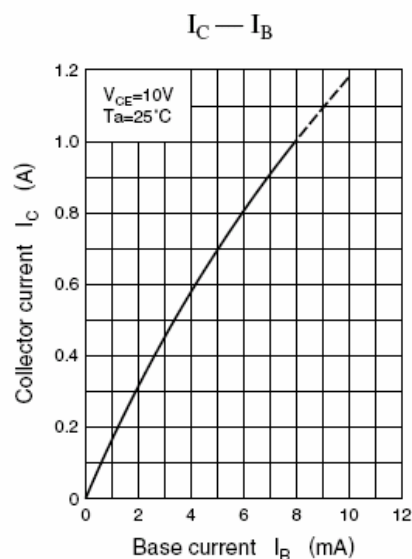
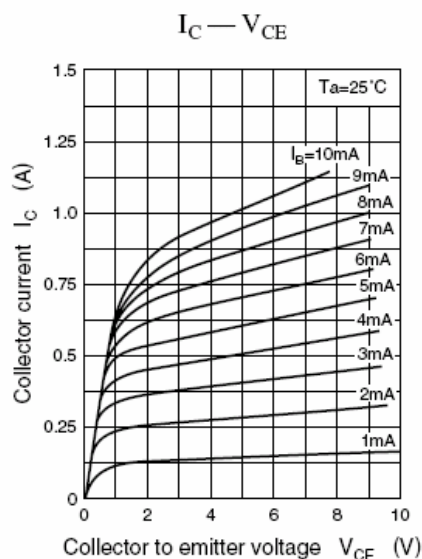
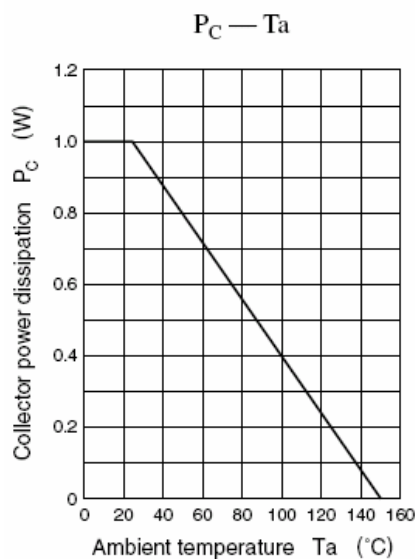
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage 2SC1383 2SC1384	$V_{(BR)CBO}$	$I_C=10\mu\text{A}$, $I_E=0$	30 60			V
Collector-emitter breakdown voltage 2SC1383 2SC1384	$V_{(BR)CEO}$	$I_C=2\text{mA}$, $I_B=0$	25 50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}$, $I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=20\text{V}$, $I_E=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=10\text{V}$, $I_C=500\text{mA}$	85		340	
	$h_{FE(2)}$	$V_{CE}=5\text{V}$, $I_C=1\text{A}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}$, $I_B=50\text{mA}$			0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500\text{mA}$, $I_B=50\text{mA}$			1.2	V
Transition frequency	f_T	$V_{CE}=10\text{V}$, $I_C=50\text{mA}$		200		MHz

CLASSIFICATION OF $h_{FE(1)}$

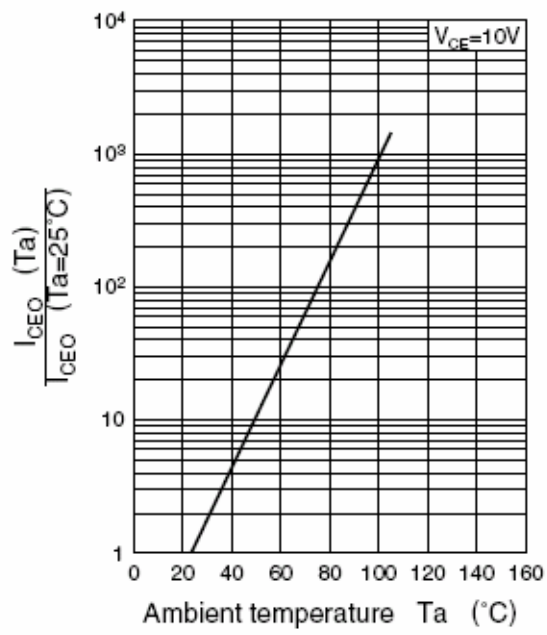
Rank	Q	R	S
Range	85-170	120-240	170-340

Typical Characteristics

2SC1383,4



$I_{CEO} - T_a$



Area of safe operation (ASO)

