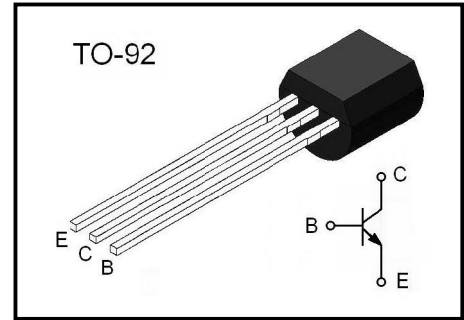


**NPN Plastic-Encapsulate Transistors**

**Features**

- ◆ High breakdown Voltage
- ◆ High DC Current Gain
- ◆ Complementary to with 2SA1013



**Absolute Maximum Ratings** Ta=25°C unless otherwise noted

Parameter	Symbol	Value	Unit
Collector-Base Voltage	$BV_{CBO}$	180	V
Collector-Emitter Voltage	$BV_{CEO}$	160	V
Emitter-Base Voltage	$BV_{EBO}$	6	V
Collector Current	$I_C$	1	A
Collector Power Dissipation	$P_C$	700	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-55~150	°C

**Electrical Characteristics** Ta=25°C unless otherwise noted

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	$BV_{CBO}$	$I_C = 100\mu A, I_E = 0$	180			V
Collector-emitter breakdown voltage	$BV_{CEO}$	$I_C = 1mA, I_B = 0$	160			V
Emitter-base breakdown voltage	$BV_{EBO}$	$I_E = 100\mu A, I_C = 0$	6			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = 160V, I_E = 0$			1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE} = 5V, I_C = 200mA$	60		320	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500mA, I_B = 50mA$			1.5	V
Base-emitter on voltage	$V_{BE(on)}$	$V_{CE} = 5V, I_C = 5mA$			0.75	V
Transition frequency	$f_T$	$V_{CE} = 5V, I_C = 200mA$	20			MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10V, I_E = 0, f = 1MHz$			20	pF

**$h_{FE}$  Classification**

Classification	R	O	Y
Range	60-120	100-200	160-320

Typical Characteristics

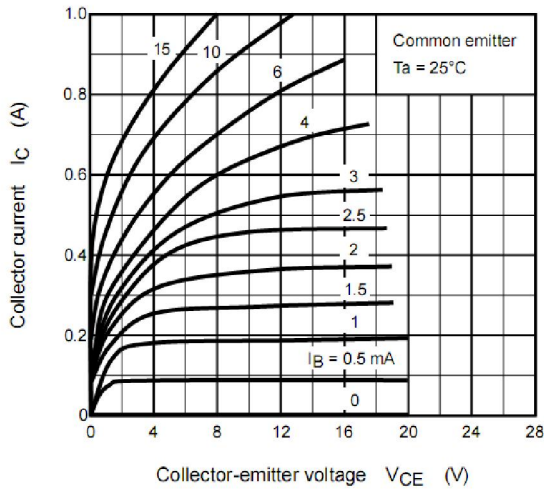


Figure 1. Static Characteristic

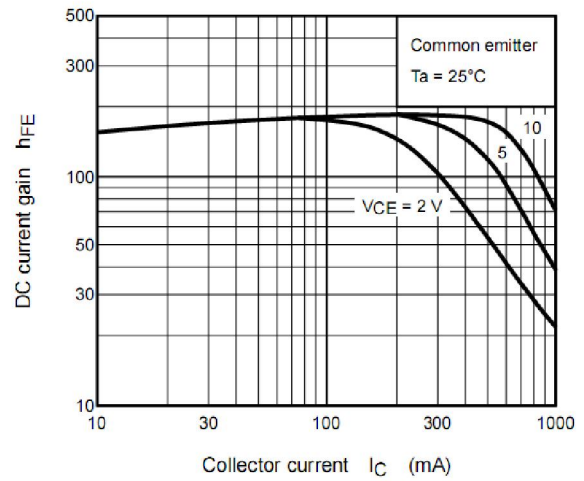


Figure 2. DC current Gain

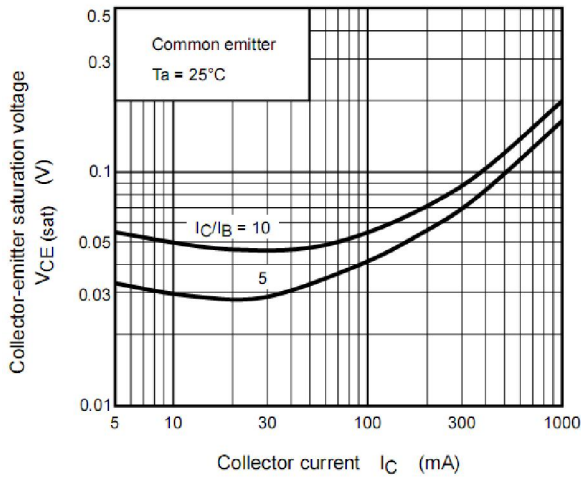


Figure 3. Saturation Voltage

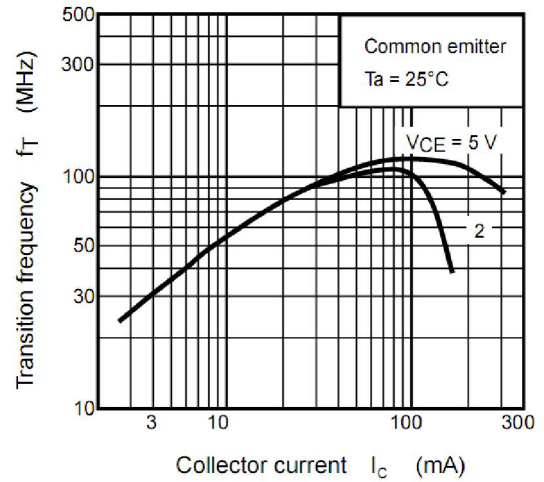


Figure 4. Current Gain Bandwidth Product

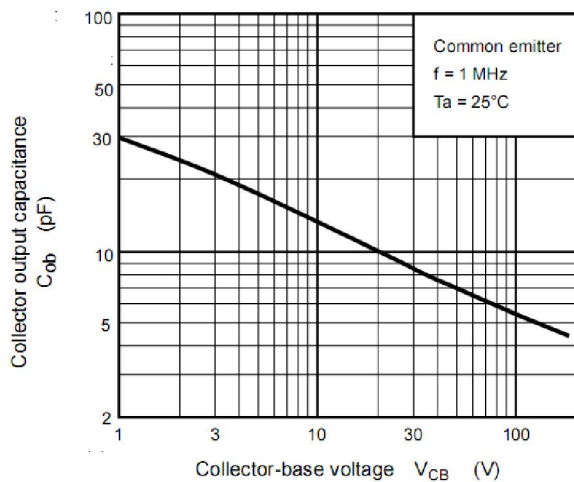


Figure 5. Collector Output Capacitance

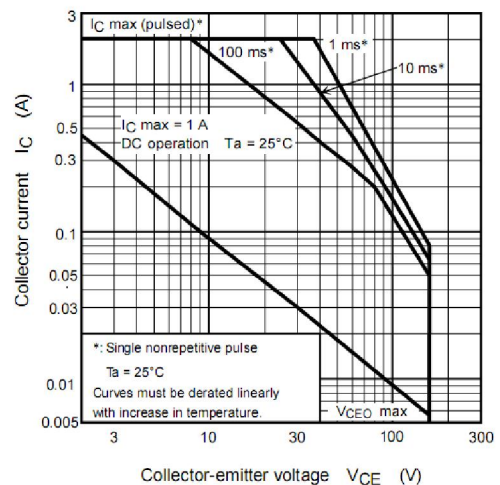


Figure 6. Safe Operating Area

**Package Dimensions**

**TO-92**

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.70	0.130	0.146
A1	2.30	2.70	0.091	0.106
b	0.40	0.50	0.016	0.020
b1	0.50	0.70	0.020	0.028
c	0.35	0.45	0.014	0.018
D	4.45	4.70	0.175	0.185
E	4.40	4.65	0.173	0.183
e	1.17	1.37	0.046	0.054
e1	2.34	2.64	0.092	0.104
L	13.50	14.50	0.531	0.571
L1	1.80	2.20	0.071	0.087

**Product Specification Classification**

Part Number	Package	Marking	Pack
2SC2383	TO-92	2SC2383 XXXXX	2000PCS/box