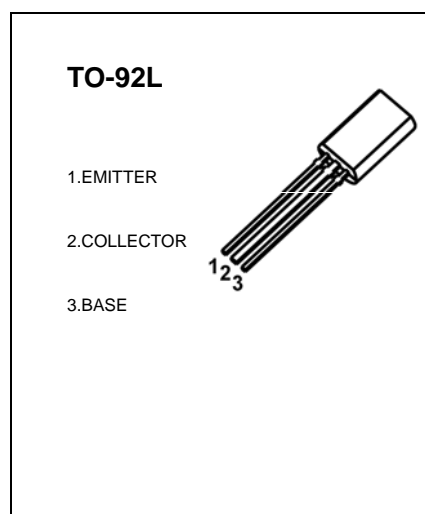


TO-92L Plastic-Encapsulate Transistors

2SC2655 TRANSISTOR (NPN)

FEATURES

- Low Saturation Voltage: $V_{CE(sat)}=0.5V(\text{Max})(I_C=1A)$
- High Speed Switching Time: $t_{stg}=1\mu s(\text{Typ.})$
- AEC-Q101 qualified (Automotive grade with suffix " Q".)

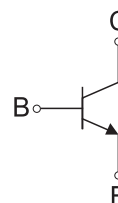


MARKING



C2655=Device code
Solid dot = Green molding compound device,
if none, the normal device
XXX=Code

Equivalent Circuit



ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
2SC2655	TO-92L	Bulk	500pcs/Bag
2SC2655-TA	TO-92L	Tape	2000pcs/Box

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

Symbol	Parameter	Symbol	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current –Continuous	2	A
P_C	Collector Power Dissipation	0.9	W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55-150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

 $T_a=25^\circ\text{C}$ unless otherwise specified

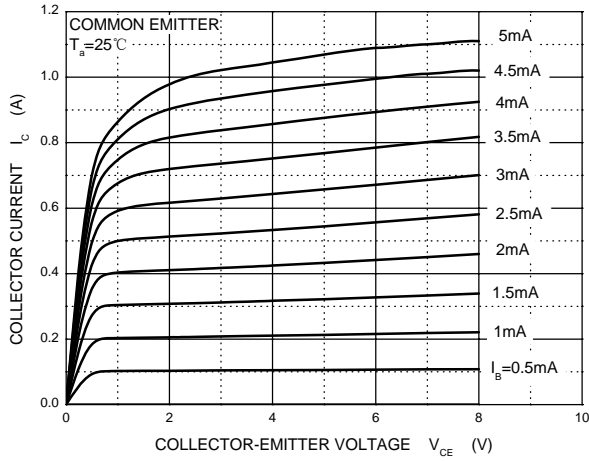
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	50			V	
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	50			V	
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5			V	
Collector cut-off current	I_{CBO}	$V_{CB}=50\text{V}, I_E=0$			1	μA	
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			1	μA	
DC current gain	$h_{FE(1)}$	$V_{CE}=2\text{V}, I_C=500\text{mA}$	70		240		
	$h_{FE(2)}$	$V_{CE}=2\text{V}, I_C=1.5\text{A}$	40				
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1\text{A}, I_B=0.05\text{A}$			0.5	V	
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=1\text{A}, I_B=0.05\text{A}$			1.2	V	
Transition frequency	f_T	$V_{CE}=2\text{V}, I_C=0.5\text{A}$		100		MHz	
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		30		pF	
Switch time	Tune on Time	t_{on}	$V_{CC}=30\text{V}, I_C=1\text{A},$ $I_{B1}=-I_{B2}=0.05\text{A}$		0.1		μs
	Storage Time	t_{stg}			1		
	Fall Time	t_f			0.1		

CLASSIFICATION OF $h_{FE(1)}$

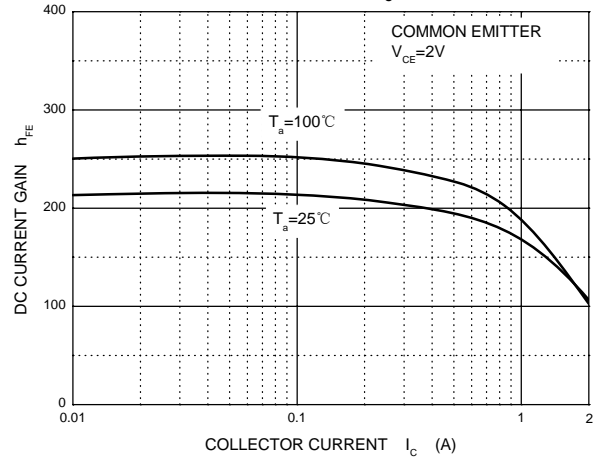
Rank	O	Y
Range	70-140	120-240

Typical Characteristics

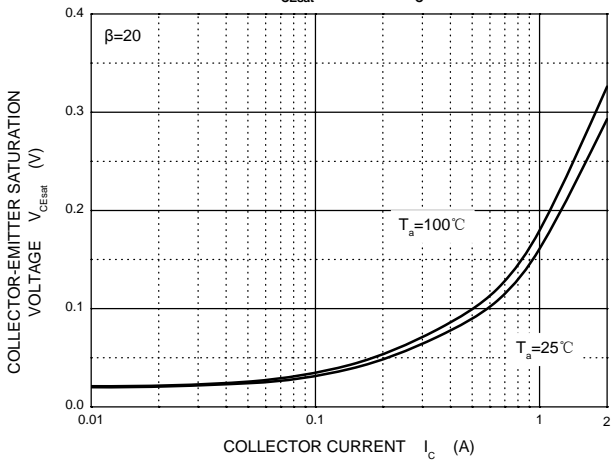
Static Characteristic



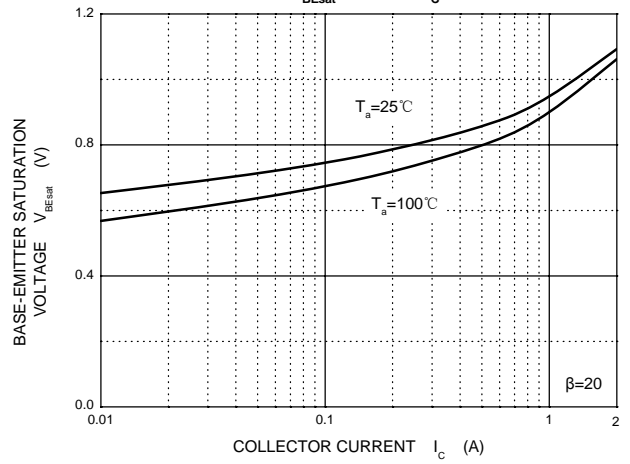
h_{FE} — I_c



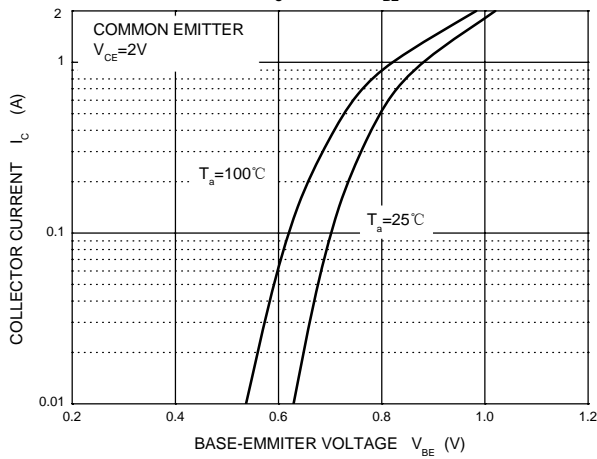
V_{CEsat} — I_c



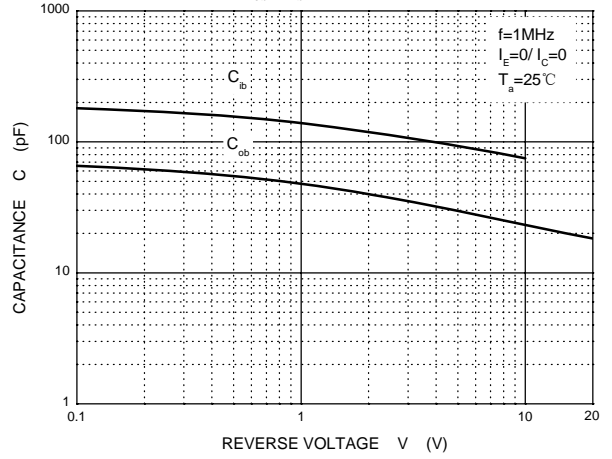
V_{BEsat} — I_c



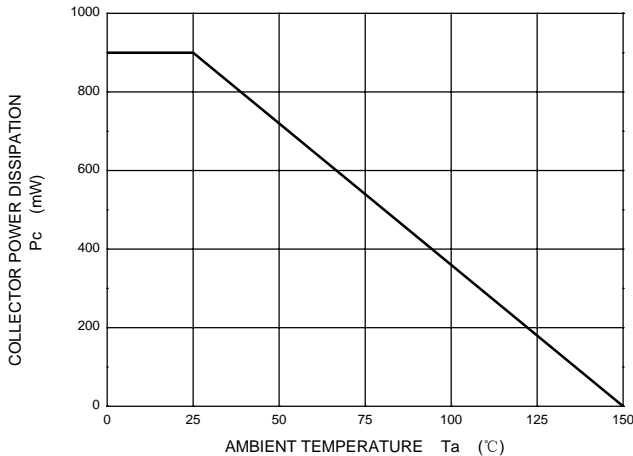
I_c — V_{BE}



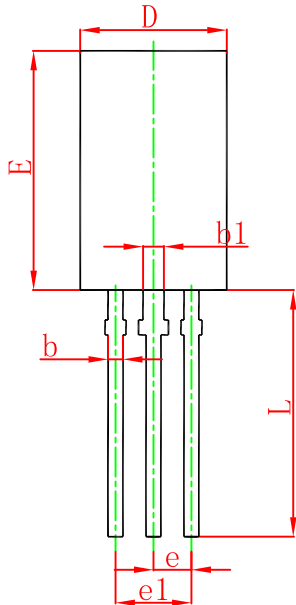
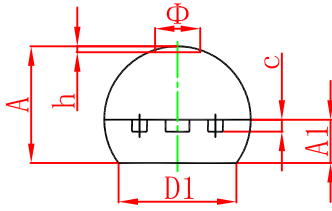
C_{ob}/C_{ib} — V_{CB}/V_{EB}



P_c — T_a

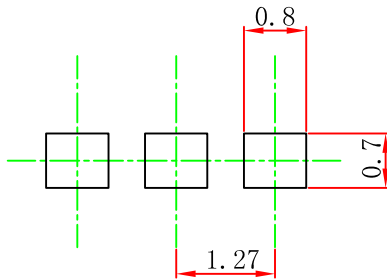


TO-92L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	3.750	4.050	0.148	0.159
A1	1.280	1.580	0.050	0.062
b	0.380	0.550	0.015	0.022
b1	0.620	0.780	0.024	0.031
c	0.350	0.450	0.014	0.018
D	4.750	5.050	0.187	0.199
D1	4.000		0.157	
E	7.850	8.150	0.309	0.321
e	1.270 TYP.		0.050 TYP.	
e1	2.440	2.640	0.096	0.104
L	13.800	14.200	0.543	0.559
Φ		1.600		0.063
h	0.000	0.300	0.000	0.012

TO-92L Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.