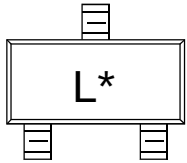
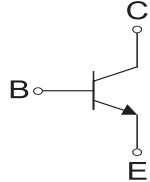


SOT-23 Plastic-Encapsulate Transistors**2SC3052**

TRANSISTOR (NPN)

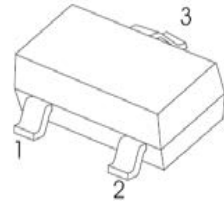
FEATURES

- Low collector to emitter saturation voltage

MARKING**Equivalent Circuit**

HFE	150-800		
RANGE	150-300	250-500	400-800
MARKING	LE	LF	LG

SOT - 23



1. BASE
2. EMITTER
3. COLLECTOR

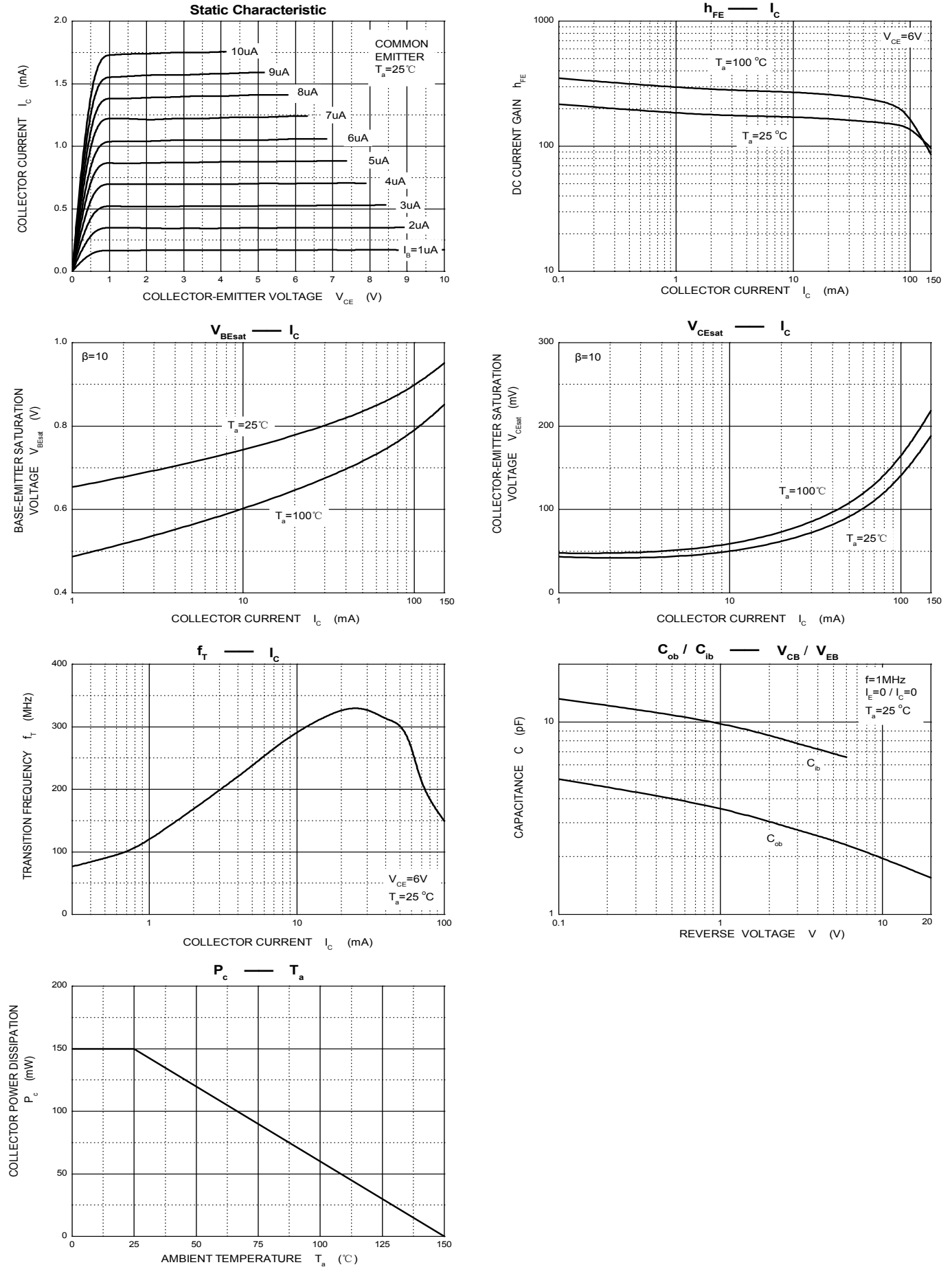
MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector- Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	0.2	A
P_C	Collector Power Dissipation	150	mW
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	Max	Unit
Collector-base breakdown voltage	$V_{(BR) CBO}$	$I_C = 100 \mu\text{A}, I_E = 0$	50		V
Collector-emitter breakdown voltage	$V_{(BR) CEO}$	$I_C = 100 \mu\text{A}, I_B = 0$	50		V
Emitter-base breakdown voltage	$V_{(BR) EBO}$	$I_E = 100 \mu\text{A}, I_C = 0$	6		V
Collector cut-off current	I_{CBO}	$V_{CB} = 50 \text{ V}, I_E = 0$		0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 6 \text{ V}, I_C = 0$		0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 6 \text{ V}, I_C = 1 \text{ mA}$	150	800	
	$h_{FE(2)}$	$V_{CE} = 6 \text{ V}, I_C = 0.1 \text{ mA}$	50		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100 \text{ mA}, I_B = 10 \text{ mA}$		0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100 \text{ mA}, I_B = 10 \text{ mA}$		1	V
Transition frequency	f_T	$V_{CE} = 6 \text{ V}, I_C = 10 \text{ mA}$	180		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 6 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		4	pF
Noise figure	NF	$V_{CE} = 6 \text{ V}, I_E = -0.1 \text{ mA}, f = 1 \text{ KHz}, R_G = 2 \text{ K}\Omega$		15	dB

Typical Characteristics



Package Outline Dimensions (SOT-23)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Suggested Pad Layout (SOT-23)



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