

DESCRIPTION

2SC6053 is a mini package resin sealed silicon NPN epitaxial type transistor designed with high collector current, small $V_{CE(sat)}$.

FEATURE

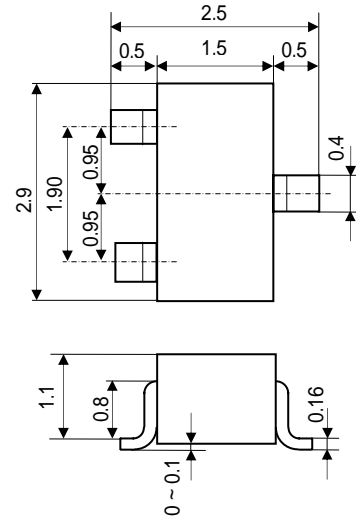
- Super mini package for easy mounting
- High collector current $I_C = 650\text{mA}$
- Low collector to emitter saturation voltage
 $V_{CE(sat)} = 0.5\text{V max}$

APPLICATION

Small type motor drive, relay drive, power supply

OUTLINE DRAWING

Unit : mm



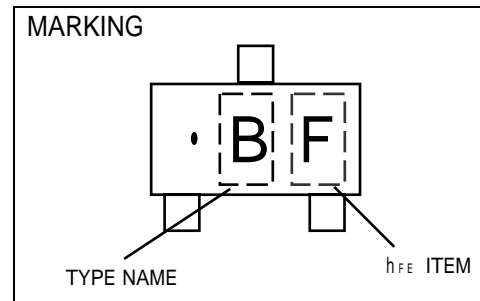
TERMINAL CONNECTER

- : BASE
- : EMITTER EIAJ : SC-59
- : COLLECTOR JEDEC : TO-236 resemblance

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

Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector to Base voltage	25	V
V_{CEO}	Collector to Emitter voltage	20	V
V_{EBO}	Emitter to Base voltage	4	V
I_O	Collector current	650	mA
P_c	Collector dissipation	150	mW
T_j	Junction temperature	+ 150	
T_{stg}	Storage temperature	-55 ~ + 150	

MARKING



ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

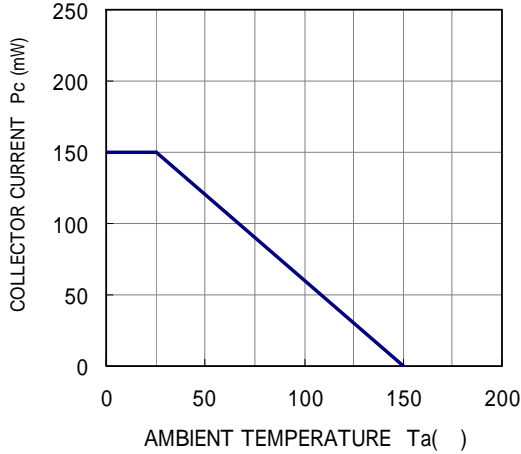
Parameter	Symbol	Test conditions	Limits			Unit
			Min	Typ	Max	
C to E break down voltage	$V_{(BR)CEO}$	$I_C=100\ \mu\text{A}$, $R_{BE}=\infty$	20			V
C to B break down voltage	$V_{(BR)CBO}$	$I_C=10\ \mu\text{A}$, $I_E=0$	25			V
E to B break down voltage	$V_{(BR)EBO}$	$I_E=10\ \mu\text{A}$, $I_C=0$	4			V
Collector cut off current	I_{CBO}	$V_{CB}=25\text{V}$, $I_E=0$			1	μA
Emitter cut off current	I_{EBO}	$V_{EB}=2\text{V}$, $I_C=0$			1	μA
DC forward current gain	h_{FE}^*	$V_{CE}=4\text{V}$, $I_C=100\text{mA}$	150		800	---
C to E saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}$, $I_B=25\text{mA}$		0.3	0.5	V
Gain band width product	fT	$V_{CE}=6\text{V}$, $I_E=-10\text{mA}$		290		MHz

* : It shows h_{FE} classification in right table.

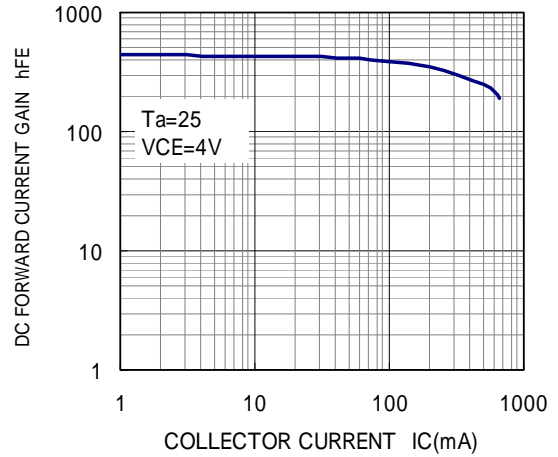
Item	E	F	G
h_{FE}	150 to 300	250 to 500	400 to 800

TYPICAL CHARACTERISTICS

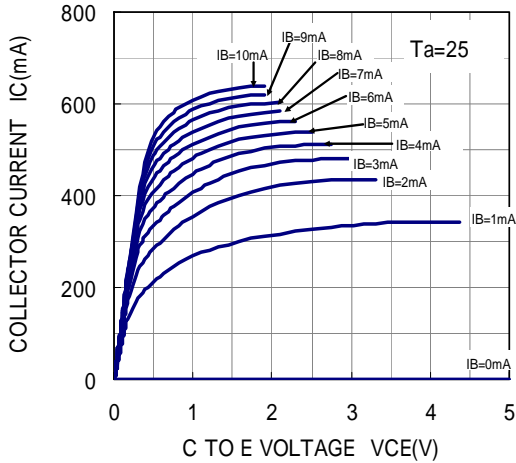
COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE



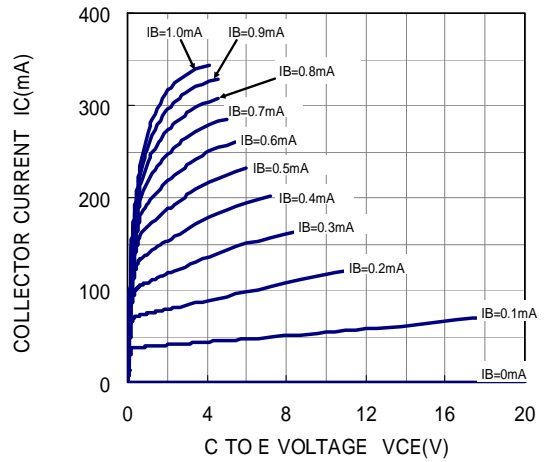
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



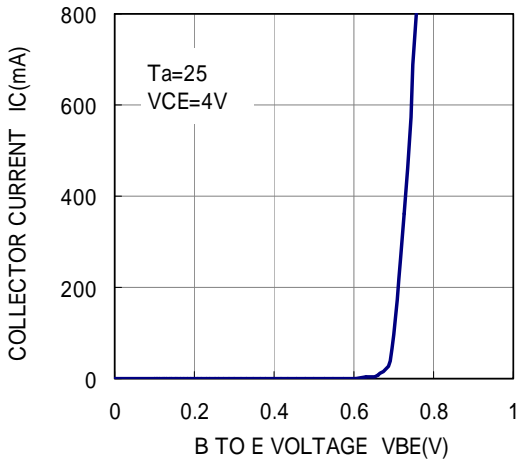
COMMON EMITTER OUTPUT (1)



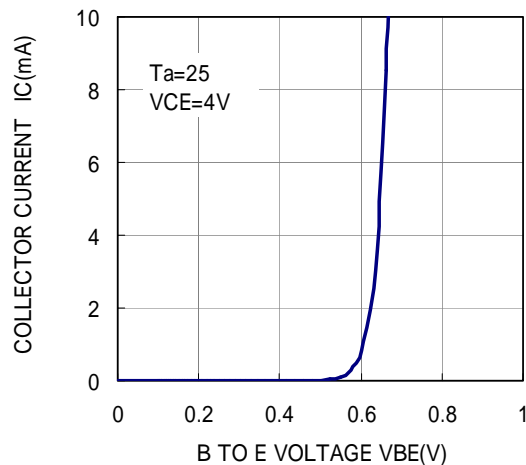
COMMON EMITTER OUTPUT (2)



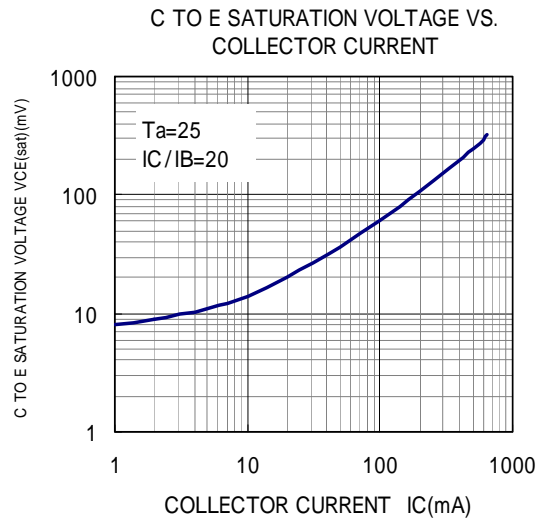
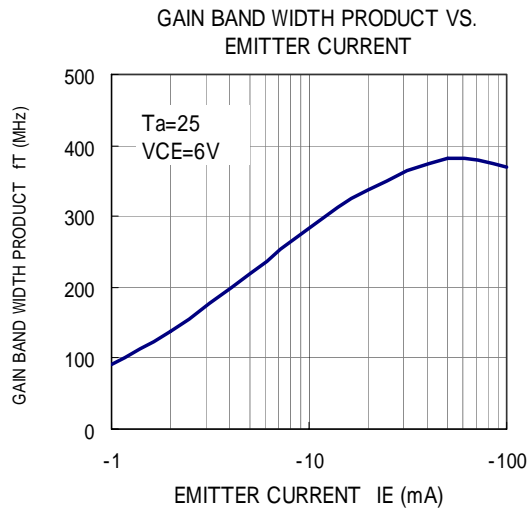
COMMON EMITTER TRANSFER (1)



COMMON EMITTER TRANSFER (2)



TYPICAL CHARACTERISTICS





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