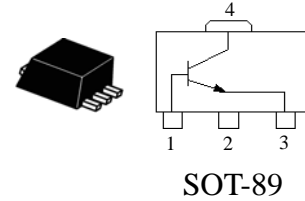


NPN-Silicon General use Transistors

1W、1.5A、25V

Applications: Can be used for switching and amplifying in various electrical and electronic circuit.



Maximum ratings

Parameters	Symbol	Rating	Unit
Collector-emitter voltage ($I_B=0$)	V_{CEO}	25	V
Collector-base voltage ($I_E=0$)	V_{CBO}	40	V
Emitter-base voltage ($I_C=0$)	V_{EBO}	6	V
Collector current	I_C	1.5	A
Total dissipation power ($T_A=25^\circ\text{C}$)*	P_{tot}	1	W
Junction temperature	T_{jm}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55~150	$^\circ\text{C}$

* Device is mounted on a printed circuit board.

Marking

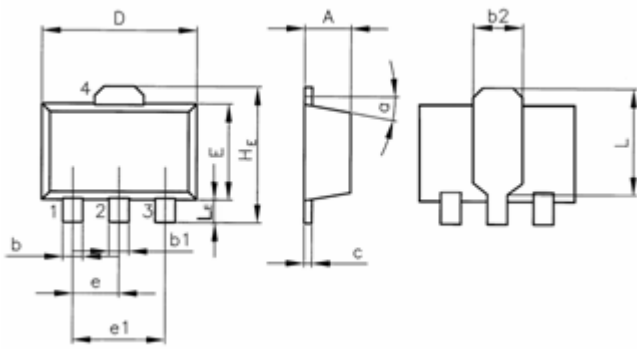
2SC5053R=GD

Electrical characteristics (Unless otherwise specified, $T_A=25^\circ\text{C}$)

Parameters	Symbol	Test condition	Min.	typ	Max.	Unit
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=2\text{mA}$, $I_B=0$	25	—	—	V
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$, $I_E=0$	40	—	—	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$, $I_C=0$	6	—	—	V
Forward current transfer ratio	h_{FE}	$V_{CE}=1\text{V}$; $I_C=100\text{mA}$	200	—	300	—
Collector-base current	I_{CBO}	$V_{CB}=35\text{V}$, $I_E=0$	—	—	100	nA
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=800\text{mA}$, $I_B=80\text{mA}$	—	—	0.5	V
Characteristic frequency	f_T	$I_C=50\text{mA}$, $V_{CE}=10\text{V}$, $f=100\text{MHz}$	—	100	—	MHz

Outline Dimensions

Unit: mm



Dimensions Symbol	SOT-89		
	min	type	max
A	1.4		1.6
b	0.35		0.55
b1	0.4		0.65
b2		1.6	
c	0.35		0.45
D	4.4		4.6
E	2.35		2.55
e		1.5	
e1		3	
HE		4.15	
L		2.7	
LE		1.0	
α		5 $^{\circ}$	