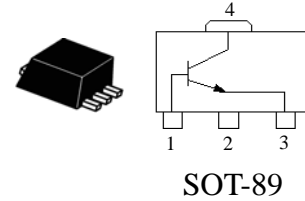


NPN-Silicon General use Transistors

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

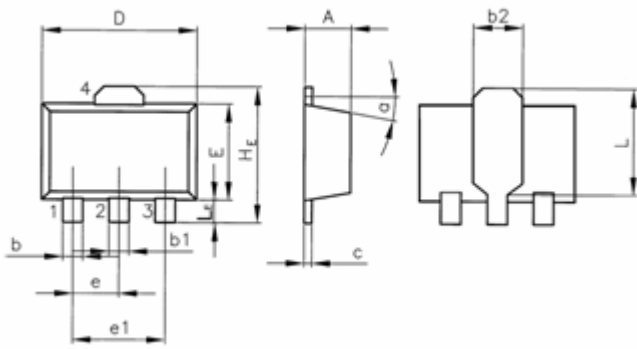
2SC5053R=GD

### 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	
$\alpha$		5 $^{\circ}$	

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