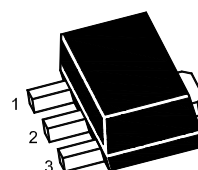


HSC4374U

NPN Silicon Epitaxial Planar Transistor

for general purpose applications



1.Base 2.Collector 3.Emitter
SOT-89 Plastic Package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	80	V
Collector Emitter Voltage	V_{CEO}	80	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	400	mA
Base Current	I_B	80	mA
Total Power Dissipation	P_{tot}	0.5 1 ¹⁾	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

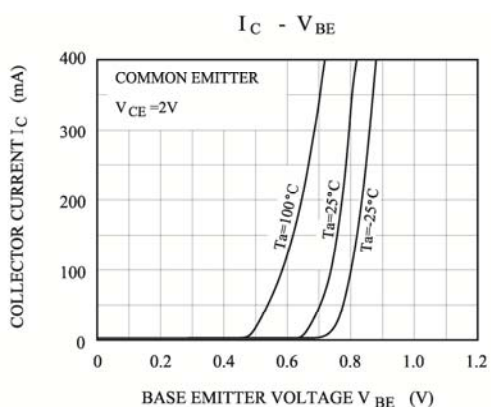
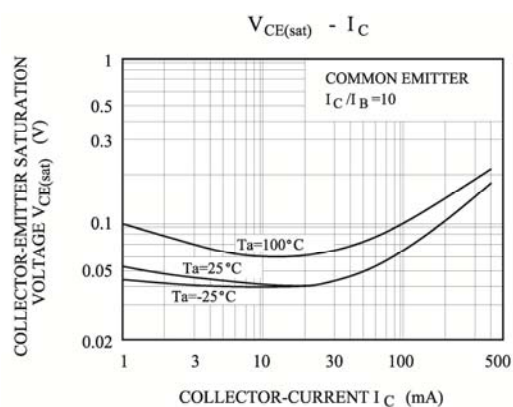
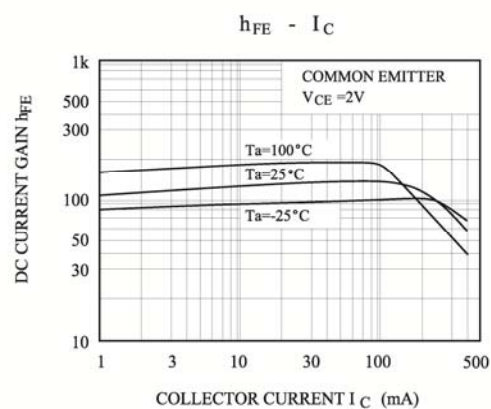
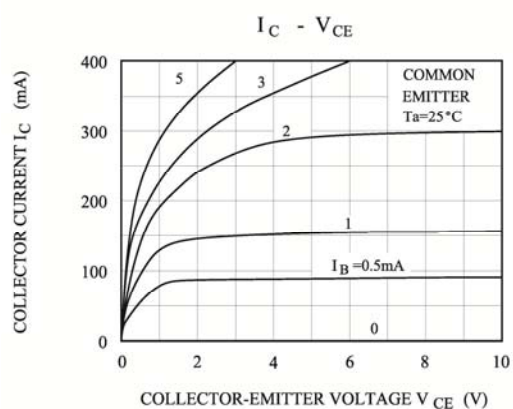
¹⁾ When mounted on a 250 mm² x 0.8 t ceramic substrate.

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 2\text{ V}$, $I_C = 50\text{ mA}$	h_{FE}	70	--	140	--
at $V_{CE} = 2\text{ V}$, $I_C = 200\text{ mA}$	h_{FE}	120	-	240	-
	h_{FE}	50		-	
Collector Base Cutoff Current at $V_{CB} = 80\text{ V}$	I_{CBO}	-	-	100	nA
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	I_{EBO}	-	-	100	nA
Collector Emitter Breakdown Voltage at $I_C = 10\text{ mA}$	$V_{(BR)CEO}$	80	-	-	V
Collector Emitter Saturation Voltage at $I_C = 200\text{ mA}$, $I_B = 20\text{ mA}$	$V_{CE(sat)}$	-	-	0.4	V
Base Emitter Voltage at $V_{CE} = 2\text{ V}$, $I_C = 5\text{ mA}$	$V_{BE(on)}$	0.55	-	0.8	V
Transition Frequency at $V_{CE} = 10\text{ V}$, $I_C = 10\text{ mA}$	f_T	-	100	-	MHz
Collector Output Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	10	-	pF

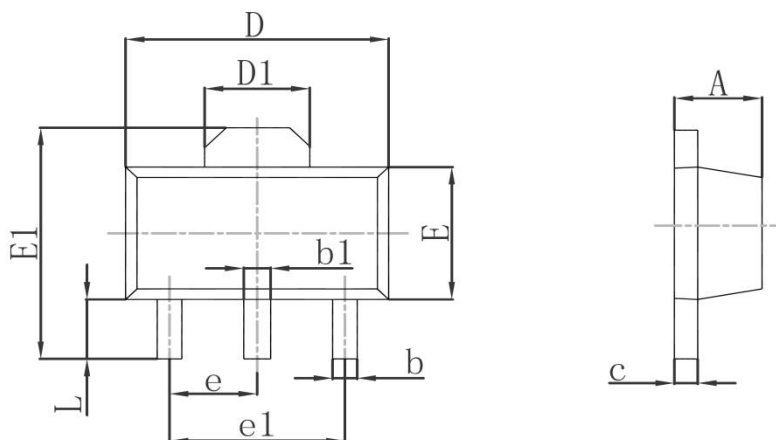
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Typical Characteristics



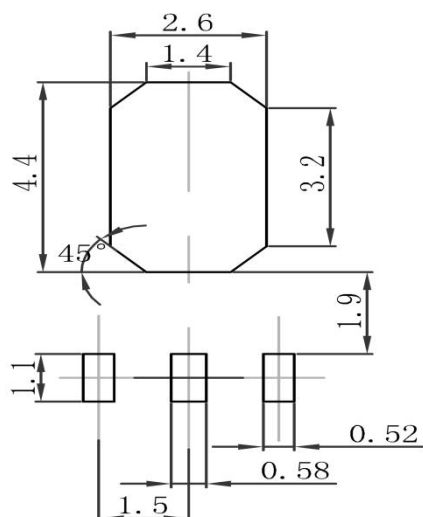
HSC4374U

SOT-89 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550REF		0.061REF	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500TYP		0.060TYP	
e1	3.000TYP		0.118TYP	
L	0.900	1.200	0.035	0.047

SOT-89 Suggested Pad Layout

**Note:**

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only