

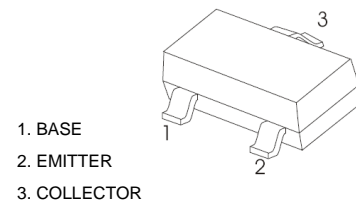
Simplified outline

F8050HQLG TRANSISTOR (NPN)

SOT-23

Features

- Power dissipation
 $P_{CM} : 0.3 \text{ W (} T_{amb}=25 \text{)}$
- Collector current
 $I_{CM} : 1.5 \text{ A}$
- Collector-base voltage
 $V_{(BR)CBO} : 40\text{V}$
- Operating and storage junction temperature range
 $T_J, T_{stg} : -55 \text{ to } +150$



Device Marking: 1HC

Electrical Characteristics ($T_{amb}=25$ unless otherwise specified)

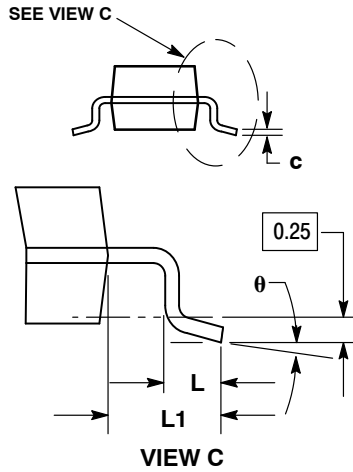
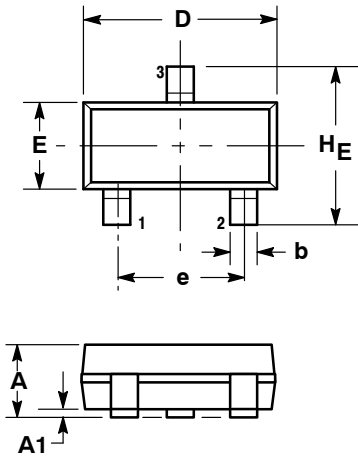
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100 \mu\text{A}, I_E = 0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 0.1\text{mA}, I_B = 0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100 \mu\text{A}, I_C = 0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB} = 40\text{V}, I_E = 0$			0.1	μA
Collector cut-off current	I_{CEO}	$V_{CB} = 20\text{V}, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 1\text{V}, I_C = 100\text{mA}$	120		350	
	$h_{FE(2)}$	$V_{CE} = 1\text{V}, I_C = 800\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 800\text{mA}, I_B = 80\text{mA}$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 800\text{mA}, I_B = 80\text{mA}$			1.2	V
Transition frequency	f_T	$V_{CE} = 10\text{V}, I_C = 50\text{mA}$ $f = 30\text{MHz}$	100			MHz

Classification Of $h_{FE(1)}$

Rank	L	H
Range	120-200	200-350

Package Dimensions

SOT-23



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. 318-01 THRU -07 AND -09 OBSOLETE, NEW STANDARD 318-08.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1.00	1.11	0.035	0.040	0.044
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.37	0.44	0.50	0.015	0.018	0.020
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.10	0.20	0.30	0.004	0.008	0.012
L1	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.40	2.64	0.083	0.094	0.104

STYLE 6:

- PIN 1. BASE
2. EMITTER
3. COLLECTOR

SOLDERING FOOTPRINT*

