S9014

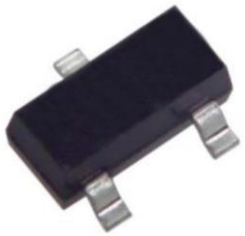
NPN Plastic-Encapsulate Transistors

Mechanical Data

- Case: SOT-23 Molded plastic
- Epoxy: UL94V-O rate flame retardant
- RoHS compliant package

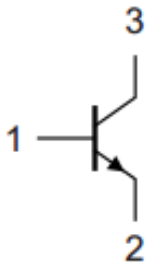
Packing & Order Information

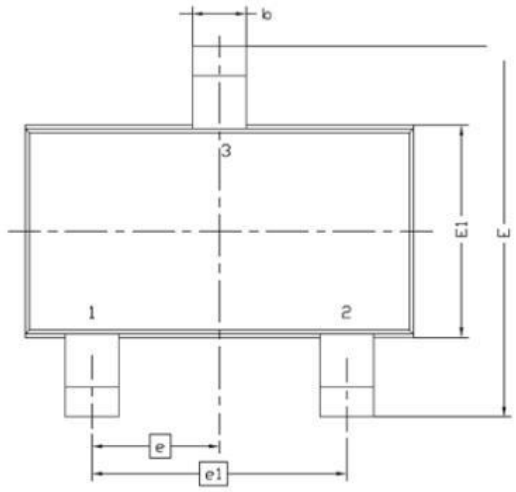
3,000/Reel

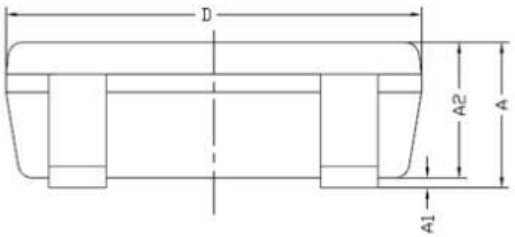


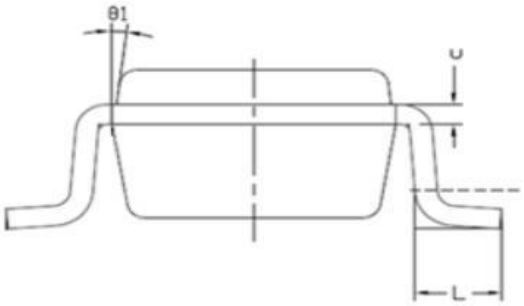
RoHS
COMPLIANT

Graphic symbol









Symbol	MILLIMETERS	
	MIN	MAX
A	0.8	1.2
A1	0	0.1
A2	0.7	1.1
b	0.3	0.5
c	0.1	0.2
D	2.7	3.1
E	2.6	3
E1	1.4	1.8
e	0.95 BSC	
e1	1.9 BSC	
L	0.3	0.6
θ1	7° NOM	

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MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	0.1	A
P_C	Collector Power Dissipation	0.2	W
Tj	Junction Temperature	150	°C
Tstg	Storage Temperature	-55 to +150	°C

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Symbol	Parameter	Test Conditions	MIN	TYP	MAX	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C = 100μA , I_E = 0	50			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C = 0.1 mA , I_B = 0	45			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E = 100μA , I_C = 0	5			V
I_{CBO}	Collector cut-off current	V_{CB} = 50 V , I_E = 0			0.1	μA
I_{CEO}	Collector cut-off current	V_{CB} = 35 V , I_E = 0			0.1	μA
I_{EBO}	Emitter cut-off current	V_{EB} = 3 V , I_C = 0			0.1	μA
h_{FE}	DC current gain	V_{CE} = 5 V , I_C = 1 mA	200		1000	
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C = 100 mA , I_B = 5 mA			0.3	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C = 100 mA , I_B = 5 mA			1.0	V
f_T	Transition frequency	V_{CE} = 5 V , I_C = 10 mA f = 30 MHz	150			MHz

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■RATINGS AND CHARACTERISTIC CURVES

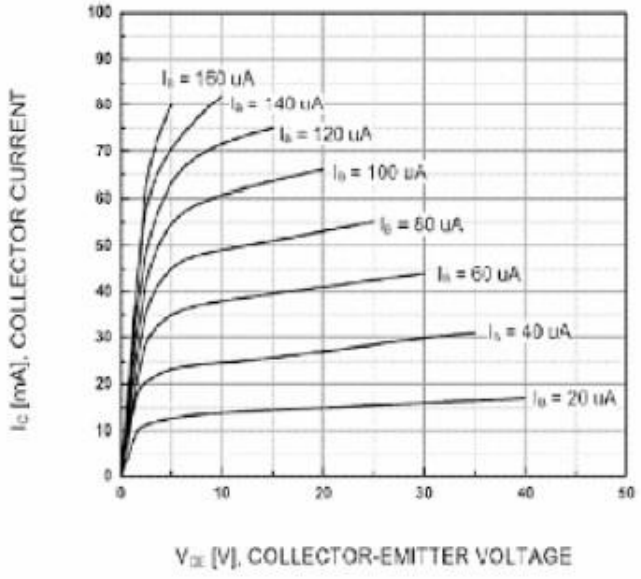

FIG.1- STATIC CHARACTERISTICS

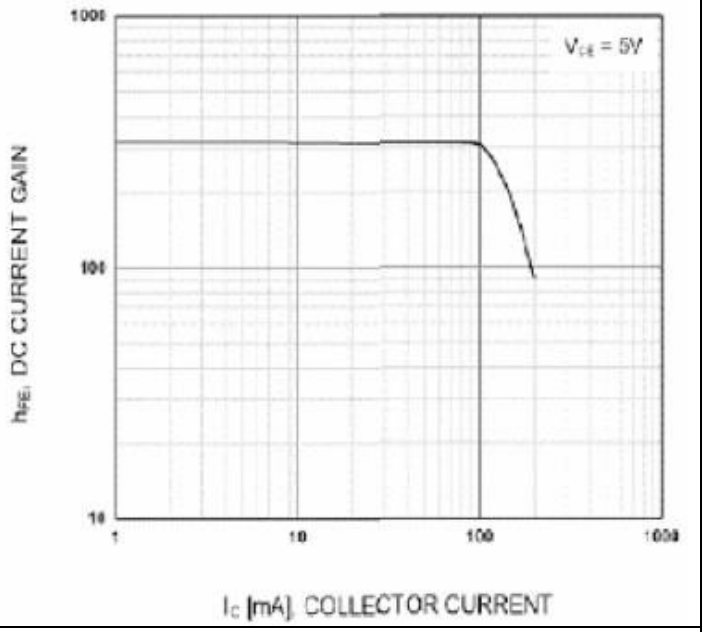

FIG.2- DC CURRENT GAIN

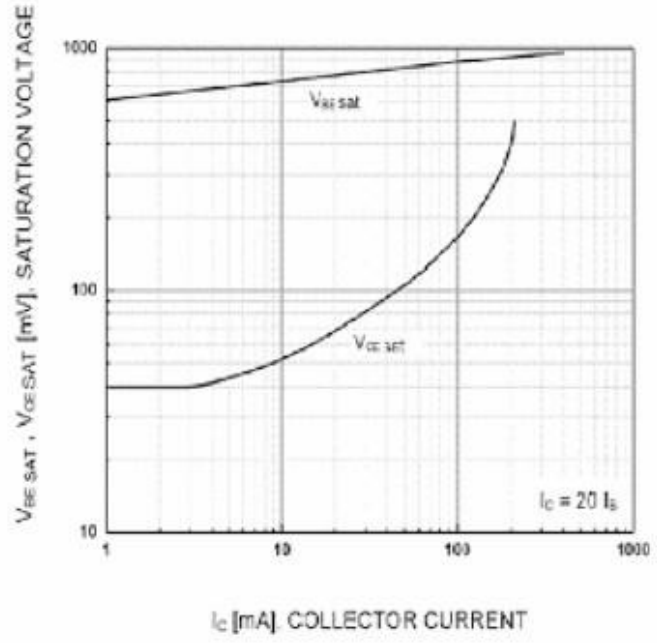

FIG.3- BASE-EMITTER SATURATION VOLTAGE COLLECTOR-EMITTER SATURATION VOLATAGE

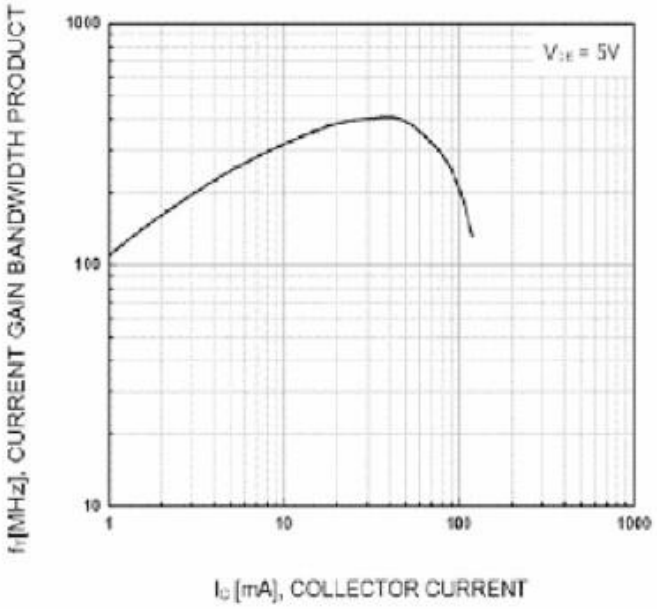

FIG.4- CURRENT GAIN BANDWIDTH PRODUCT

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