2SB2955R-HAF

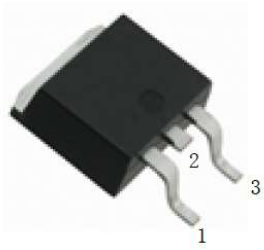
PNP Silicon Epitaxial Planar Power Transistor

Features

• Halogen and Antimony Free(HAF),
RoHS compliant

Applications

• For power switching and amplifier applications



1.Base 2.Collector 3.Emitter
TO-252 Plastic Package

Absolute Maximum Ratings (T_a = 25℃)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	70	V
Collector Emitter Voltage	$-V_{CEO}$	60	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	10	A
Power Dissipation T_C = 25℃	P_{tot}	54	W
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	- 55 to + 150	℃

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Case	$R_{\theta JC}$	2.3	℃/W
Thermal Resistance from Junction to Ambient [1)]	$R_{\theta JA}$	71.4	℃/W

[1)] Device mounted on FR-4 substrate PC board, 2oz copper, with 1-inch square copper plate in still air.

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Characteristics at T_{amb} = 25℃

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 4 V, $-I_C$ = 4 A at $-V_{CE}$ = 4 V, $-I_C$ = 10 A	 h_{FE} h_{FE}	 20 5	 - -	 100 -	 - -
Collector Base Cutoff Current at $-V_{CB}$ = 70 V	$-I_{CBO}$	-	-	20	µA
Collector Emitter Cutoff Current at $-V_{CE}$ = 30 V	$-I_{CEO}$	-	-	50	µA
Emitter Base Cutoff Current at $-V_{EB}$ = 5 V	$-I_{EBO}$	-	-	500	µA
Collector Emitter Saturation Voltage at $-I_C$ = 4 A, $-I_B$ = 0.4 A at $-I_C$ = 10 A, $-I_B$ = 3.3 A	$-V_{CE(sat)}$	 - -	 - -	 1.1 1.5	V
Base Emitter On Voltage at $-V_{CE}$ = 4 V, $-I_C$ = 4 A	$-V_{BE(on)}$	-	-	1.8	V
Transition Frequency at $-V_{CE}$ = 10 V, $-I_C$ = 0.5 A, f = 500 kHz	f_T	2	-	-	MHz
Collector Base Capacitance at V_{CB} = 10 V, f = 0.1 MHz	C_{ob}	-	163	-	pF

Electrical Characteristics Curves

Fig. 1 Output Characteristics Curve

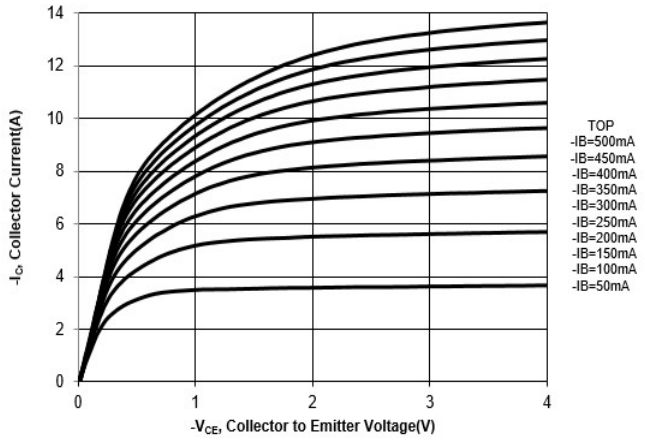


Fig. 2 Collector Curren vs. V_{BE}

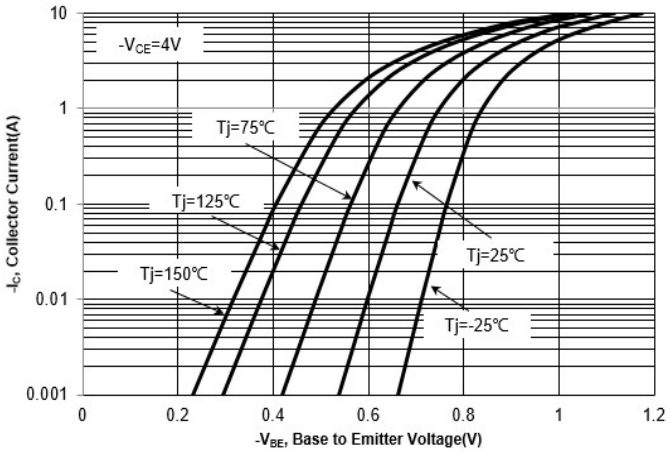


Fig. 3 h_{FE} vs. Collector Current

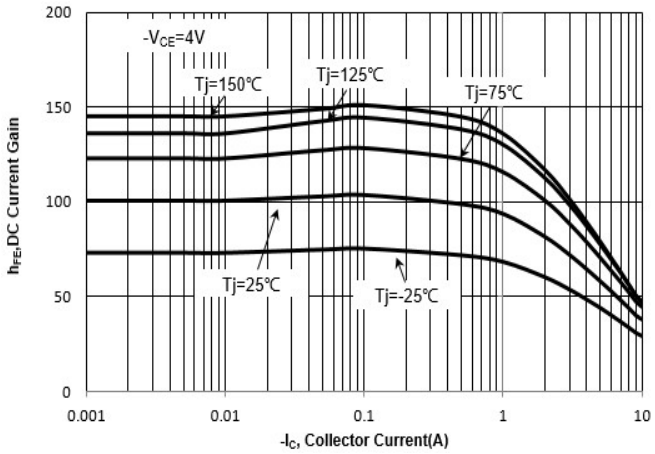
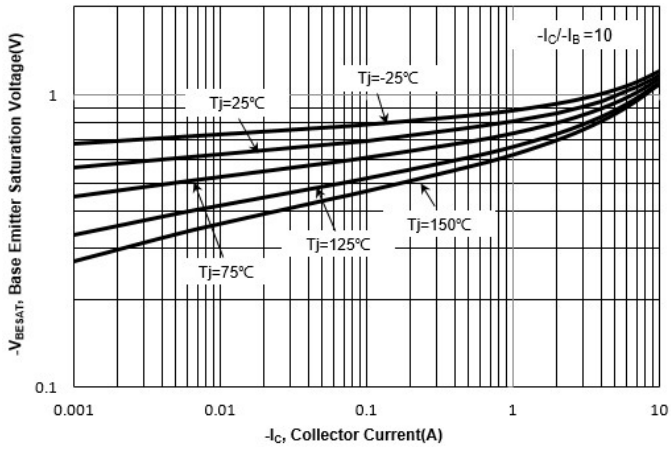


Fig. 4 $V_{BE(sat)}$ vs. Collector Current



Electrical Characteristics Curves

Fig. 5 $V_{CE(sat)}$ vs. Collector Current

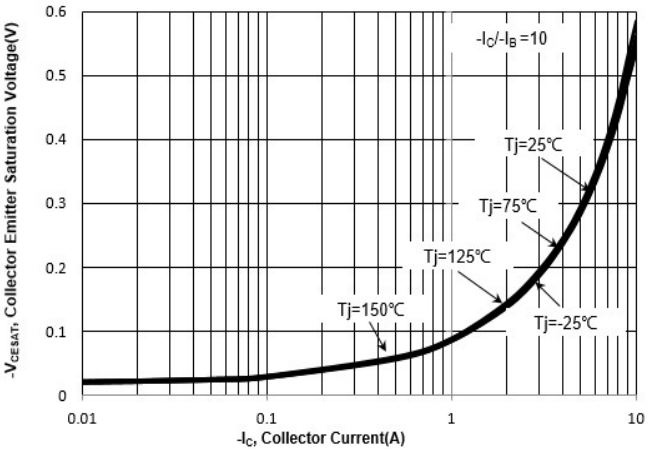


Fig 6. Output Capacitance

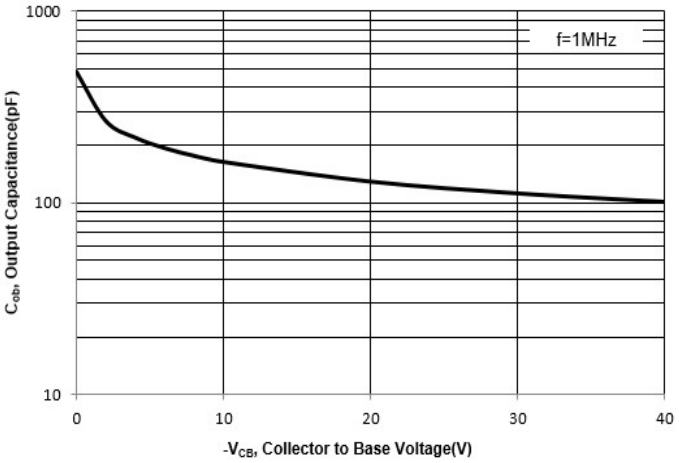
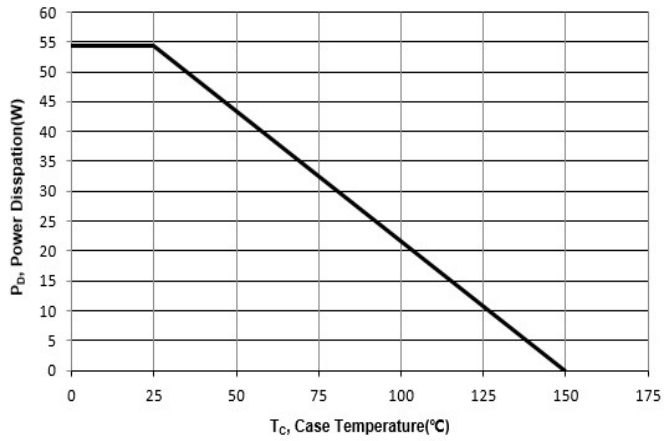


Fig. 7 Power Derating Curve



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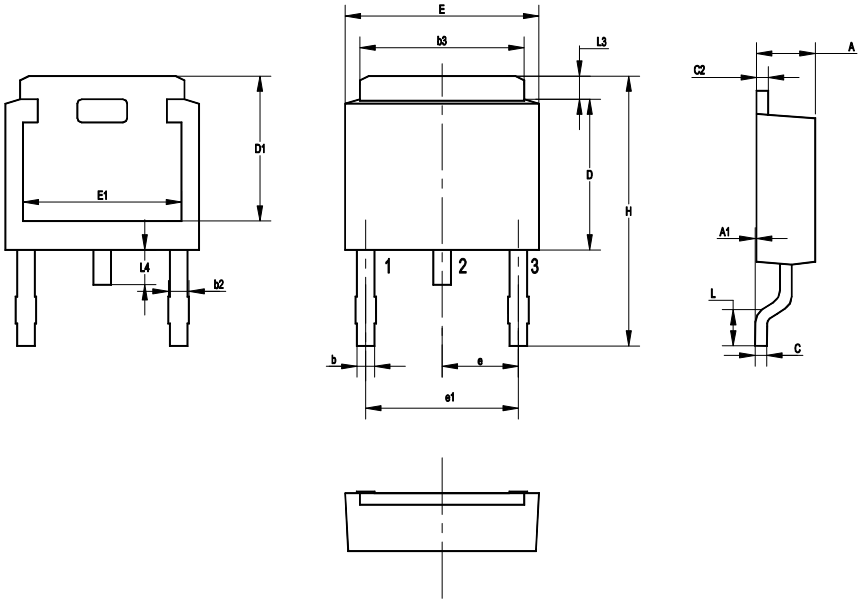
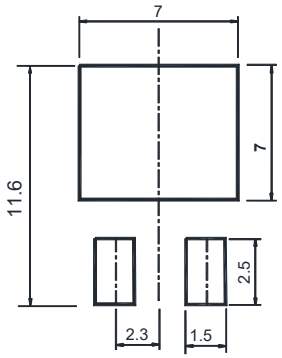
Package Outline (Dimensions in mm) TO-252



UNIT	A	A1	b	b2	b3	C	C2	D	D1	E	E1	e	e1	H	L	L3	L4
mm	2.5	0.15	1.0	1.15	5.5	0.65	0.65	6.2	5.4	6.7	5.0	2.30	4.60	10.7	1.78	1.20	1.10
	2.1	0	0.5	0.65	4.9	0.4	0.4	5.6	5.0	6.1	4.6	TYP.	TYP.	9	1.40	0.85	0.51

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
TO-252	16	8 ± 0.1	0.315 ± 0.004	330	13	2,500

Marking information

" 2SB2955R " = Part No.
" ****** " = Date Code Marking
Font type: Arial

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