

2SB1353

Transistor, PNP

Features

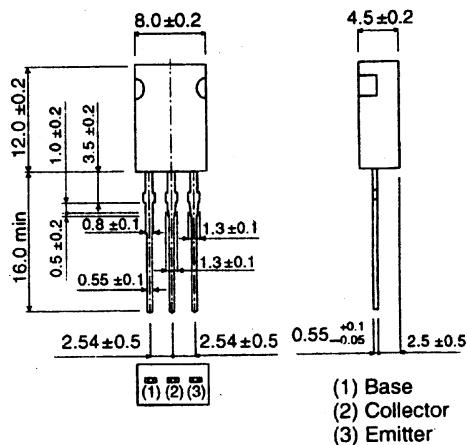
- available in HRT package
- high collector breakdown voltage, $BV_{CEO} = -120\text{ V}$
- wide safe operating area (SOA)
- high transition frequency and small output capacitance

Applications

- power amplifier

Dimensions (Units : mm)

2SB1353 (HRT)



Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit	Conditions
Collector-to-base voltage	V_{CBO}	-120	V	
Collector-to-emitter voltage	V_{CEO}	-120	V	
Emitter-to-base voltage	V_{EBO}	-5	V	
Collector current	I_C	-1.5	A	Continuous (dc)
		-3.0	A	Single pulse, $P_W = 100\text{ ms}$
Collector dissipation	P_C	1.8	W	
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$	

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2SB1353 Transistor, PNP, 2SB series

Electrical characteristics (unless otherwise noted, $T_a = 25^\circ\text{C}$)

Parameter	Symbol	Min	Typical	Max	Unit	Conditions
Collector-to-base breakdown voltage	BV_{CBO}	-120			V	$I_C = -50 \mu\text{A}$
Collector-to-emitter breakdown voltage	BV_{CEO}	-120			V	$I_C = 1 \text{ mA}$
Emitter-to-base breakdown voltage	BV_{EBO}	-5			V	$I_E = -50 \mu\text{A}$
Collector cutoff current	I_{CBO}			-1.0	μA	$V_{CB} = -100 \text{ V}$
Emitter cutoff current	I_{EBO}			-1.0	μA	$V_{EB} = -4 \text{ V}$
DC current gain	h_{FE}	60		320		$V_{CE} = -5\text{V}, I_C = -0.1 \text{ A}$
Collector-to-emitter saturation voltage	$V_{CE(sat)}$			-2	V	$I_C/I_B = -1 \text{ A}/-0.1 \text{ A}$, single pulse
Base-to-emitter saturation voltage	$V_{BE(sat)}$			-1.5	V	$I_C/I_B = -1 \text{ A}/-0.1 \text{ A}$, single pulse
Transition frequency	f_T		50		MHz	$V_{CE} = -5 \text{ V}, I_E = 0.1 \text{ A}, f = 30 \text{ MHz}$
Output capacitance	C_{ob}		30		pF	$V_{CB} = -10 \text{ V}, I_E = 0 \text{ A}, f = 1 \text{ MHz}$

h_{FE} rankings

Item	D	E	F
h_{FE}	60 ~ 120	100 ~ 200	160 ~ 320

Electrical characteristic curves

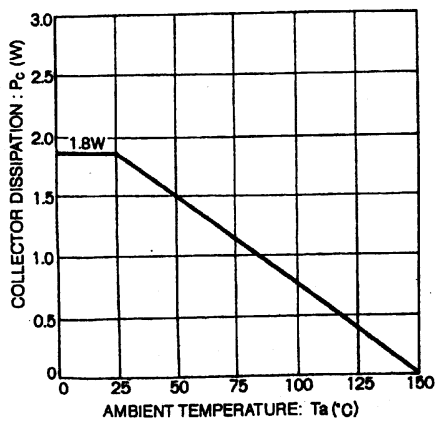


Figure 1

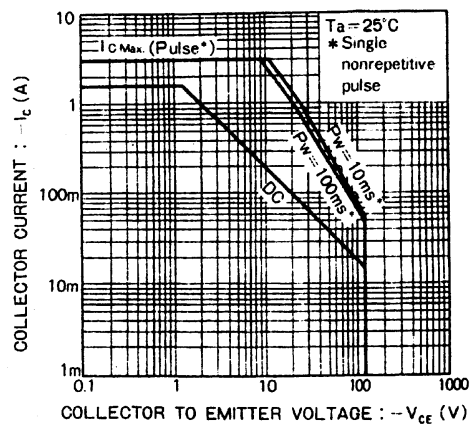


Figure 2

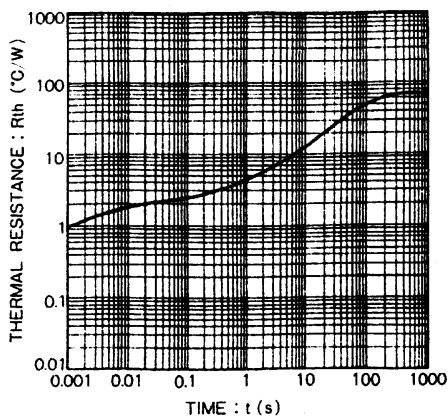


Figure 3

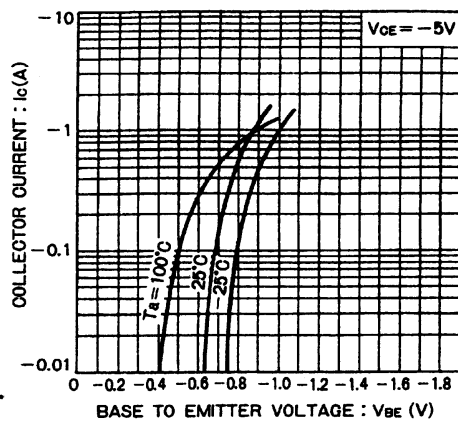


Figure 4

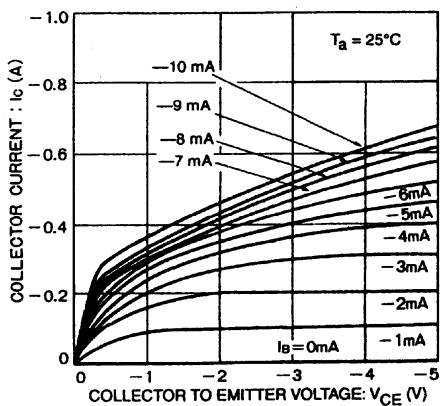


Figure 5

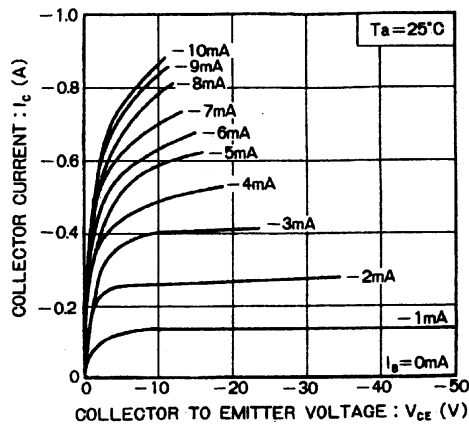


Figure 6

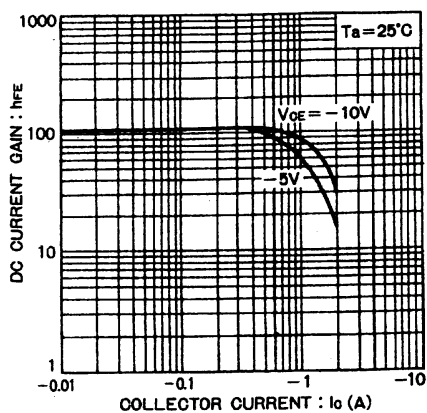


Figure 7

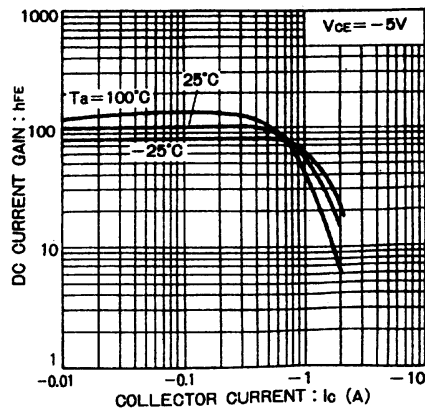


Figure 8

2SB1353 Transistor, PNP, 2SB series

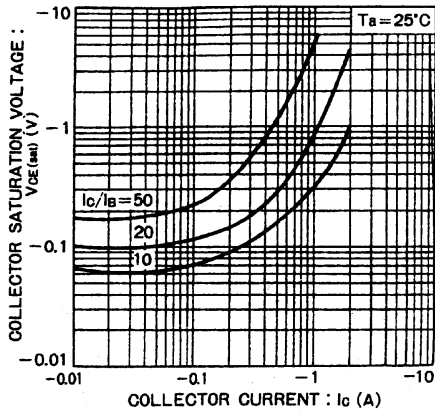


Figure 9

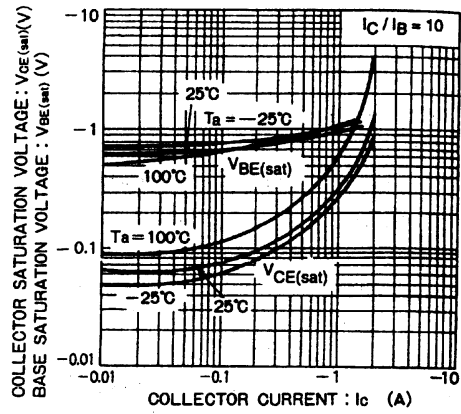


Figure 10

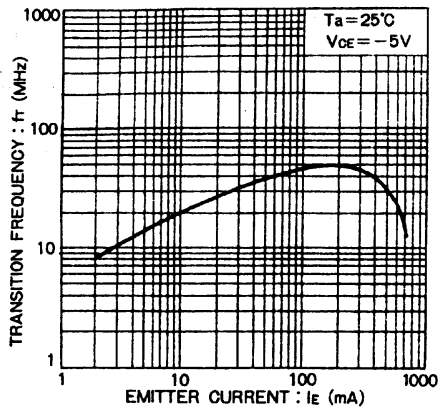


Figure 11

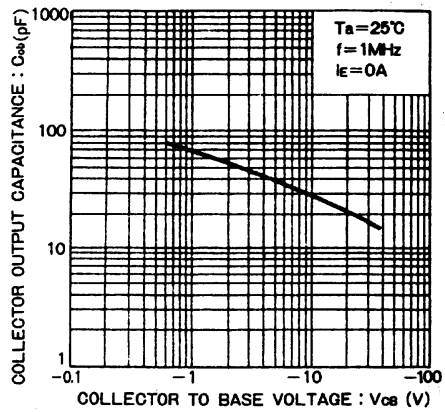


Figure 12

Ordering information

Package	Tape
Code	T114
Basic order quantity	1 000
2SB1353	★
★ = Standard, ☆ = Semi-standard, * = Special order	

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