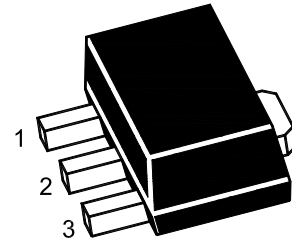


2SB751U

PNP Silicon Expitaxial Planar Transistor

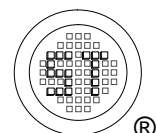


1.Base 2.Collector 3.Emitter
SOT-89 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{\text{CBO}}$	80	V
Collector Emitter Voltage	$-V_{\text{CEO}}$	60	V
Emitter Base Voltage	$-V_{\text{EBO}}$	5	V
Collector Current	$-I_{\text{C}}$	3	A
Peak Pulse Collector Current	$-I_{\text{CM}}$	6	A
Power Dissipation ¹⁾	P_{D}	1	W
Thermal Resistance, Junction to Ambient Air ¹⁾	$R_{\theta\text{JA}}$	125	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_{\text{J}}, T_{\text{stg}}$	- 55 to + 150	$^\circ\text{C}$

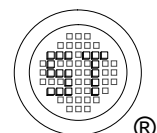
¹⁾ When mounted on a 250 mm² x 0.8 t ceramic substrate.



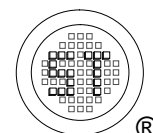
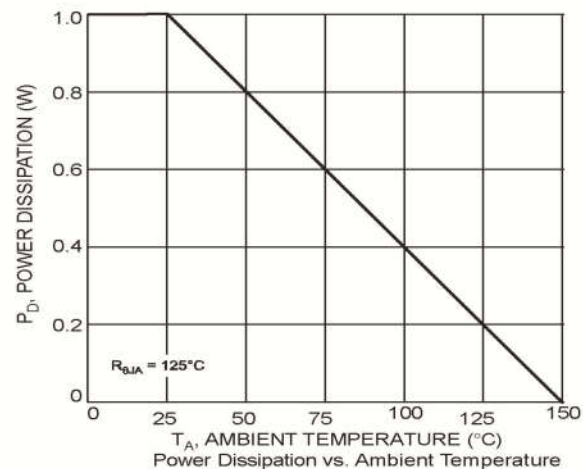
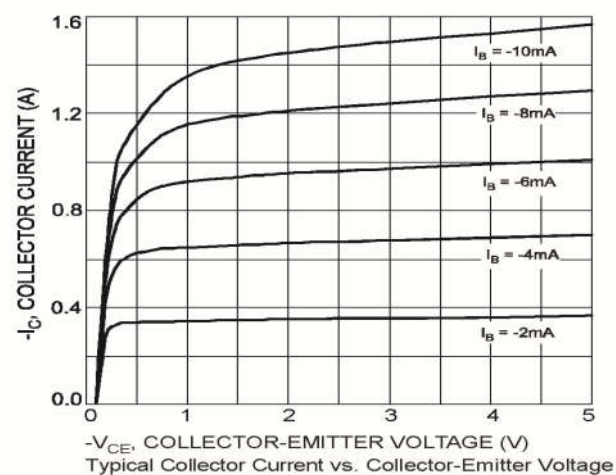
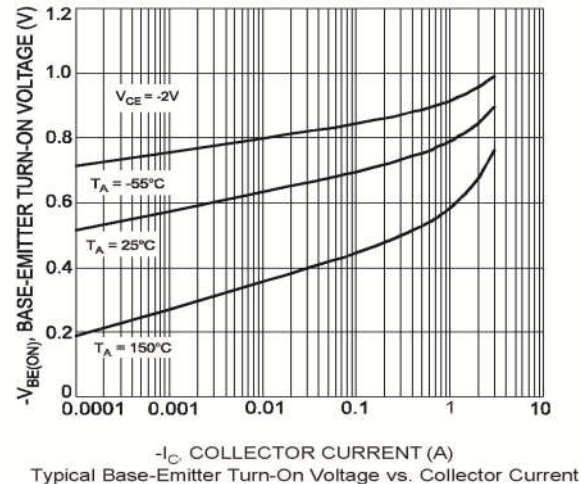
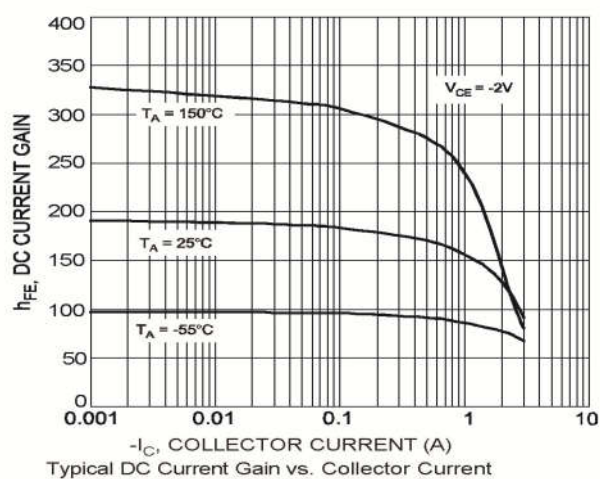
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Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain					
at $-I_C = 50\text{ mA}$, $-V_{CE} = 2\text{ V}$	h_{FE}	70	-	-	-
at $-I_C = 500\text{ mA}$, $-V_{CE} = 2\text{ V}$	h_{FE}	100	-	300	-
at $-I_C = 1\text{ A}$, $-V_{CE} = 2\text{ V}$	h_{FE}	80	-	-	-
at $-I_C = 2\text{ A}$, $-V_{CE} = 2\text{ V}$	h_{FE}	40	-	-	-
Collector Base Cutoff Current					
at $-V_{CB} = 60\text{ V}$	$-I_{CBO}$	-	-	0.1	μA
Collector Base Cutoff Current					
at $-V_{CB} = 60\text{ V}$, $T_A = 100^\circ\text{C}$	$-I_{CBO}$	-	-	10	μA
Emitter Base Cutoff Current					
at $-V_{EB} = 4\text{ V}$	$-I_{EBO}$	-	-	0.1	μA
Collector Base Breakdown Voltage					
at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	80	-	-	V
Collector Emitter Breakdown Voltage					
at $-I_C = 10\text{ mA}$	$-V_{(BR)CEO}$	60	-	-	V
Emitter Base Breakdown Voltage					
at $-I_E = 100\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage					
at $-I_C = 1\text{ A}$, $-I_B = 100\text{ mA}$	$-V_{CE(sat)}$	-	-	0.3	V
Collector Emitter Saturation Voltage					
at $-I_C = 3\text{ A}$, $-I_B = 300\text{ mA}$	$-V_{CE(sat)}$	-	-	0.6	V
Base Emitter Saturation Voltage					
at $-I_C = 1\text{ A}$, $-I_B = 100\text{ mA}$	$-V_{BE(sat)}$	-	-	1.25	V
Base Emitter Turn-On Voltage					
at $-V_{CE} = 2\text{ V}$, $-I_C = 1\text{ A}$	$-V_{BE(ON)}$	-	-	1	V
Current Gain Bandwidth Product					
at $-I_C = 50\text{ mA}$, $-V_{CE} = 10\text{ V}$, $f = 100\text{ MHz}$	f_T	100	-	-	MHz
Turn-On Delay Time					
at $-I_C = 500\text{ mA}$, $-V_{CC} = 10\text{ V}$, $-I_{B1} = -I_{B2} = 50\text{ mA}$	$t_{d(on)}$		45		ns
Turn-Off Delay Time					
at $-I_C = 500\text{ mA}$, $-V_{CC} = 10\text{ V}$, $-I_{B1} = -I_{B2} = 50\text{ mA}$	t_{off}		200		ns
Output Capacitance					
at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	-	30	pF



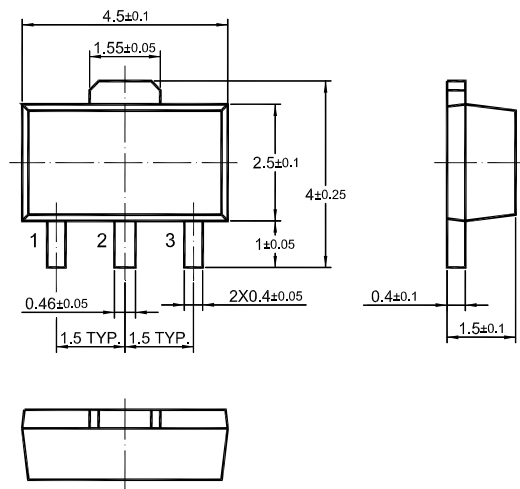
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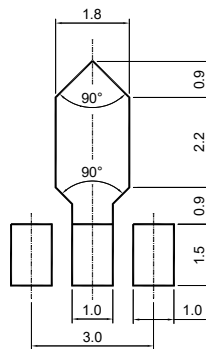
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Package Outline (Dimensions in mm)

SOT-89



Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-89	12	8 ± 0.1	0.315 ± 0.004	178	7	1,000
				330	13	4,000

Marking information

" 2SB751U " = Part No.

"YM" = Date Code Marking

"Y" = Year

"M" = Month

Font type: Arial

