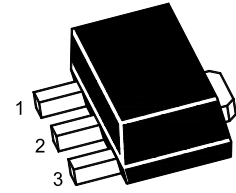


# 2SB1132U

## PNP Silicon Epitaxial Planar Power Transistor



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

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

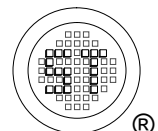
Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{\text{CBO}}$	40	V
Collector Emitter Voltage	$-V_{\text{CEO}}$	32	V
Emitter Base Voltage	$-V_{\text{EBO}}$	5	V
Collector Current - DC	$-I_{\text{C}}$	1	A
Collector Current - Pulse ( $t_p = 100 \text{ ms}$ )	$-I_{\text{CP}}$	2	A
Total Power Dissipation	$P_{\text{tot}}$	0.5 <sup>1)</sup> 2 <sup>2)</sup>	W
Junction Temperature	$T_{\text{J}}$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{Stg}}$	- 55 to + 150	$^\circ\text{C}$

### Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient	$R_{\theta\text{JA}}$	250 <sup>1)</sup> 62.5 <sup>2)</sup>	$^\circ\text{C/W}$

<sup>1)</sup> Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

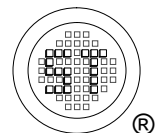
<sup>2)</sup> When mounted on a 40 X 40 X 0.7 mm ceramic board.



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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE} = 3\text{ V}$ , $-I_C = 100\text{ mA}$ Current Gain Group	P	82	-	180	-
	Q	120	-	270	-
	R	180	-	390	-
Collector Base Cutoff Current at $-V_{CB} = 20\text{ V}$	$-I_{CBO}$	-	-	0.5	$\mu\text{A}$
Emitter Base Cutoff Current at $-V_{EB} = 4\text{ V}$	$-I_{EBO}$	-	-	0.5	$\mu\text{A}$
Collector Base Breakdown Voltage at $-I_C = 50\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	40	-	-	V
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$	$-V_{(BR)CEO}$	32	-	-	V
Emitter Base Breakdown Voltage at $-I_E = 50\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at $-I_C = 500\text{ mA}$ , $-I_B = 50\text{ mA}$	$-V_{CE(sat)}$	-	-	0.5	V
Transition Frequency at $I_E = 50\text{ mA}$ , $-V_{CE} = 5\text{ V}$ , $f = 30\text{ MHz}$	$f_T$	-	150	-	MHz
Output Capacitance at $-V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	-	30	pF



## Electrical Characteristics Curves

Fig. 1 Power Derating Curve

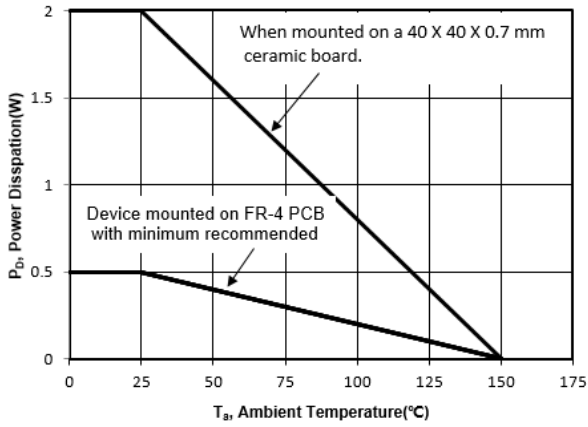


Fig. 2 Output Characteristics Curve

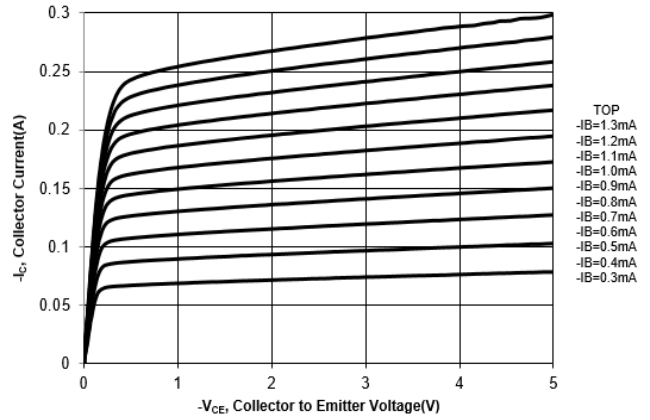


Fig. 3 Collector Current vs. Base to Emitter Voltage

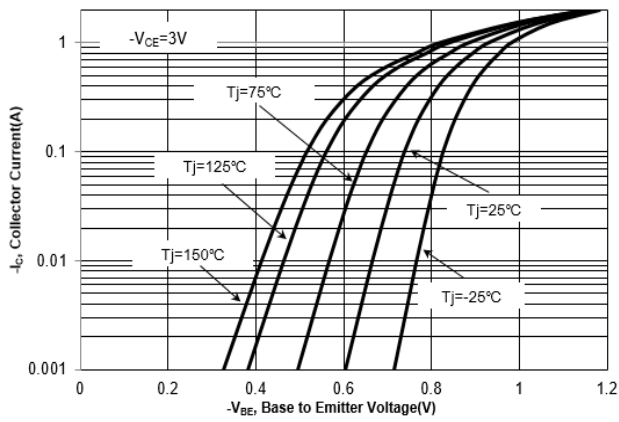
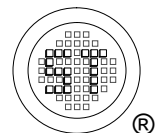
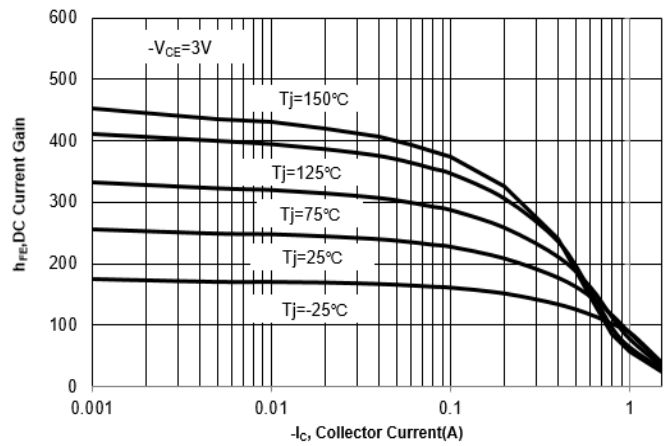


Fig. 4 DC Current Gain vs. Collector Current



## Electrical Characteristics Curves

Fig. 5  $V_{BESAT}$  vs. Collector Current

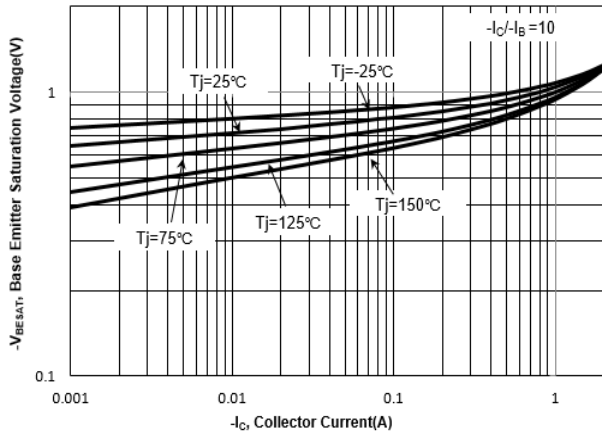


Fig. 6  $V_{CESAT}$  vs. Collector Current

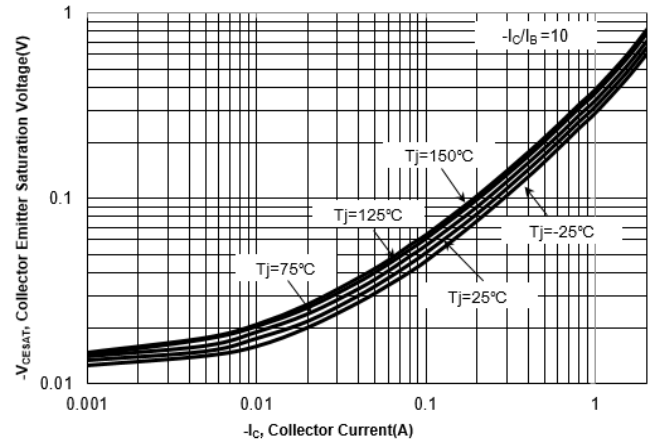
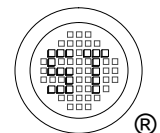
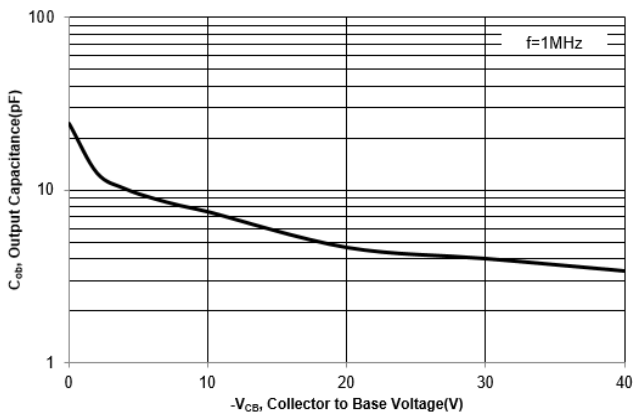


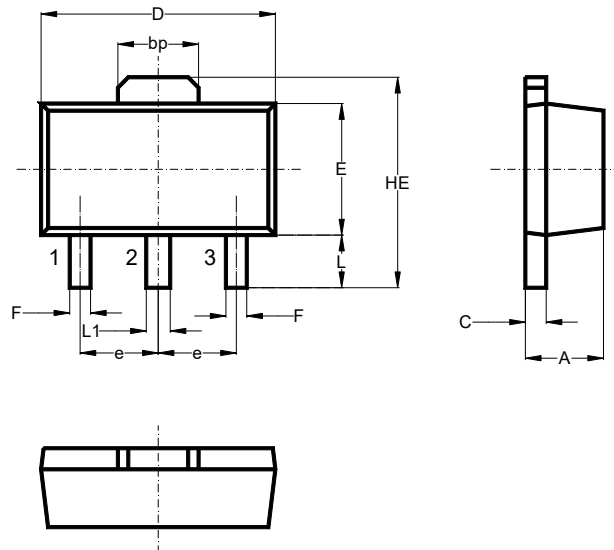
Fig. 7 Output Capacitance



# 2SB1132U

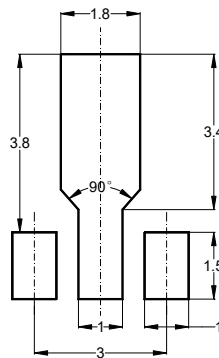
## Package Outline (Dimensions in mm)

SOT-89



Unit	A	bp	C	D	E	F	HE	e	L	L1
mm	1.6	1.60	0.5	4.6	2.6	0.45	4.25	1.5	1.05	0.51
	1.4	1.50	0.3	4.4	2.4	0.35	3.75	typ.	0.95	0.41

### 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

" 2SB1132\*U " = Part No. (" \* " = HFE grouping Code)

" YM " = Date Code Marking

" Y " = Year

" M " = Month

Font type: Arial

