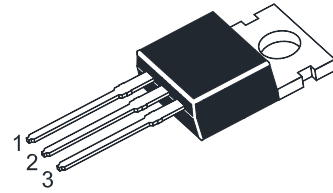


# 2SD882-HAF

## NPN Silicon Epitaxial Planar Power Transistor

### Features

- Halogen and Antimony Free(HAF), RoHS compliant



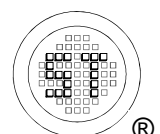
1. Emitter 2. Collector 3. Base  
TO-220FB Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CB0}$	40	V
Collector Emitter Voltage	$V_{CE0}$	30	V
Emitter Base Voltage	$V_{EB0}$	6	V
Collector Current	$I_C$	3	A
Peak Collector Current	$I_{CM}$	6	A
Power Dissipation	$P_{tot}$	2	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

### Thermal Characteristics

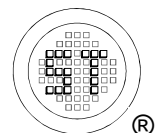
Parameter	Symbol	Max.	Unit
Thermal Resistance-Junction to Ambient	$R_{\theta JA}$	62.5	$^\circ\text{C/W}$



# 2SD882-HAF

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $V_{CE} = 2\text{ V}$ , $I_C = 1\text{ A}$	L	$h_{FE}$	60	-	120	-
	O	$h_{FE}$	100	-	200	-
	Y	$h_{FE}$	160	-	320	-
	G	$h_{FE}$	200	-	400	-
Collector Base Cutoff Current at $V_{CB} = 40\text{ V}$	$I_{CBO}$	-	-	1	$\mu\text{A}$	
Collector Emitter Cutoff Current at $V_{CE} = 30\text{ V}$	$I_{CEO}$	-	-	10	$\mu\text{A}$	
Emitter Base Cutoff Current at $V_{EB} = 6\text{ V}$	$I_{EBO}$	-	-	1	$\mu\text{A}$	
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CBO}$	40	-	-	V	
Collector Emitter Breakdown Voltage at $I_C = 10\text{ mA}$	$V_{(BR)CEO}$	30	-	-	V	
Emitter Base Breakdown Voltage at $I_E = 100\text{ }\mu\text{A}$	$V_{(BR)EBO}$	6	-	-	V	
Collector Emitter Saturation Voltage at $I_C = 2\text{ A}$ , $I_B = 200\text{ mA}$	$V_{CE(sat)}$	-	-	0.5	V	
Base Emitter Saturation Voltage at $I_C = 2\text{ A}$ , $I_B = 200\text{ mA}$	$V_{BE(sat)}$	-	-	1.5	V	
Gain Bandwidth Product at $V_{CE} = 5\text{ V}$ , $I_C = 0.1\text{ A}$ , $f = 10\text{ MHz}$	$f_T$	-	90	-	MHz	



## Electrical Characteristics Curves

Fig. 1 Output Characteristics Curve

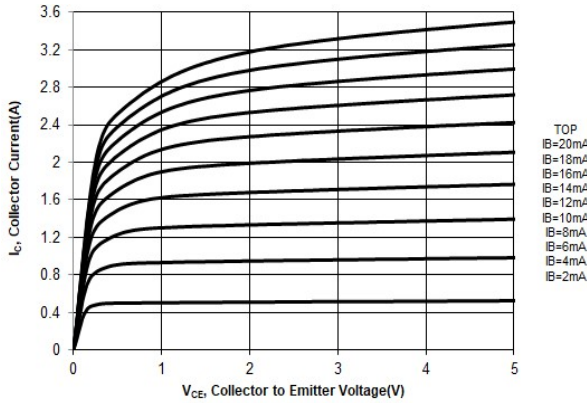


Fig. 2 Collector Current vs. Base to Emitter Voltage

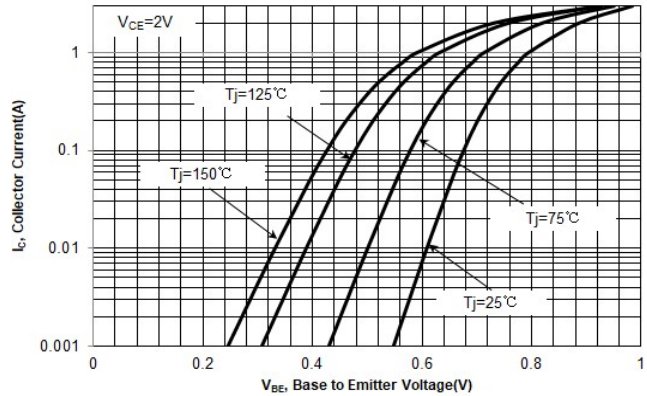


Fig. 3 DC Current Gain vs. Collector Current

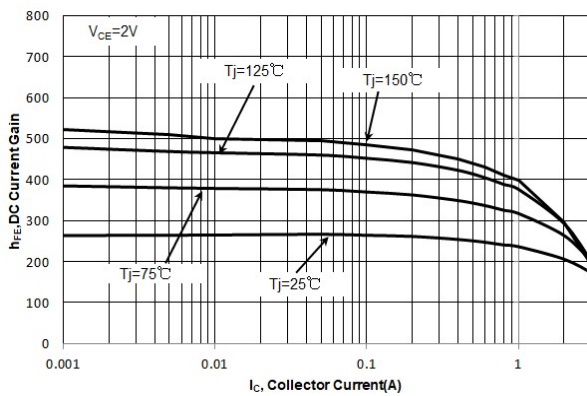


Fig. 4  $V_{BESAT}, V_{CESAT}$  vs. Collector Current

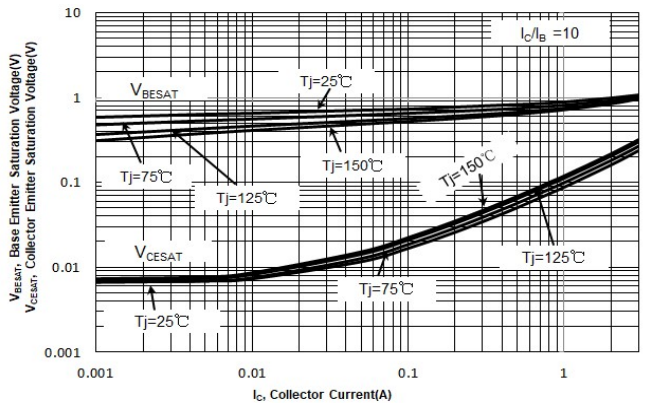


Fig. 5 Output Capacitance

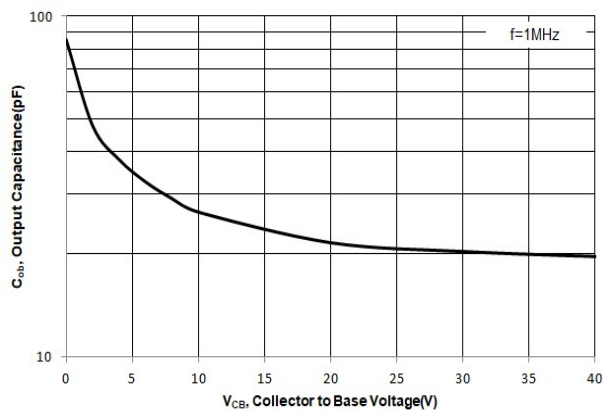
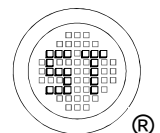
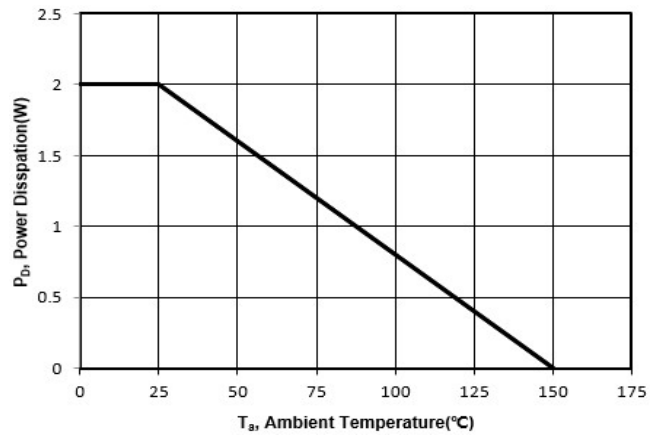


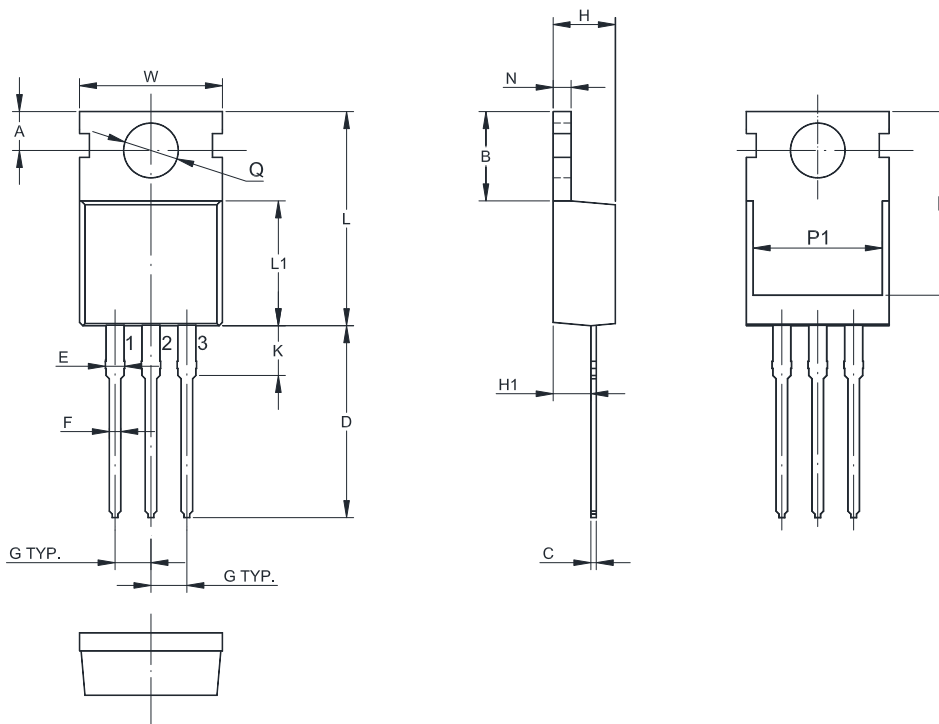
Fig. 6 Power Derating Curve



# 2SD882-HAF

## Package Outline Dimensions (Units: mm)

TO-220FB



UNIT	A	B	C	D	E	F	G	W	H	H1	K	L	L1	N
mm	2.9	6.8	0.7	15	1.5	0.9	2.54	10.2	4.7	2.5	3.1	16.8	9.4	1.4
	2.7	6.4	0.3	11	1.1	0.7	Typ.	9.8	4.3	2.2	2.7	14.8	9.0	1.2

UNIT	P	P1	Q
mm	13.3	8.2	3.7
	12.7	7.6	3.5

## Packing information

Package	Carton Quantity	Box Quantity	Base Quantity	Delivery Mode
TO-220FB	5 K / Carton	1 K / Box	50 pcs / Tube	Tube

## Marking information

" 2SD882 \* " = Part No. (" \* " = HFE grouping Code)

" \*\*\*\*\* " = Date Code Marking

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