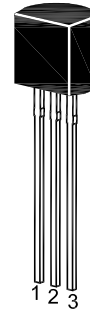


2SA733-HAF

PNP Silicon Epitaxial Planar Transistor

Features

- The transistor is subdivided into five groups, R, O, Y, P and L, according to its DC current gain. As complementary type the NPN transistor 2SC945 is recommended
- On special request, these transistors can be manufactured in different pin configurations
- Halogen and Antimony Free(HAF), RoHS compliant



1. Emitter 2. Collector 3. Base
TO-92 Plastic Package

Applications

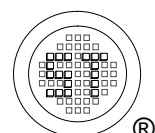
- For switching and AF amplifier

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{\text{CBO}}$	60	V
Collector Emitter Voltage	$-V_{\text{CEO}}$	50	V
Emitter Base Voltage	$-V_{\text{EBO}}$	5	V
Collector Current	$-I_{\text{C}}$	150	mA
Power Dissipation	P_{tot}	250	mW
Junction Temperature	T_{j}	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Thermal Resistance Ratings

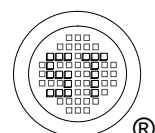
Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient	$R_{\theta\text{JA}}$	500	$^\circ\text{C/W}$



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

Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $-V_{CE} = 6\text{ V}$, $-I_C = 1\text{ mA}$	Current Gain Group R	h_{FE}	40	-	80	-
	O	h_{FE}	70	-	140	-
	Y	h_{FE}	120	-	240	-
	P	h_{FE}	200	-	400	-
	L	h_{FE}	350	-	700	-
Collector Base Cutoff Current at $-V_{CB} = 60\text{ V}$	$-I_{CBO}$	-	-	100	nA	
Emitter Base Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	-	100	nA	
Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	60	-	-	V	
Collector Emitter Breakdown Voltage at $-I_C = 10\text{ mA}$	$-V_{(BR)CEO}$	50	-	-	V	
Emitter Base Breakdown Voltage at $-I_E = 10\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	5	-	-	V	
Collector Emitter Saturation Voltage at $-I_C = 100\text{ mA}$, $-I_B = 10\text{ mA}$	$-V_{CE(sat)}$	-	-	0.3	V	
Base Emitter On Voltage at $-V_{CE} = 6\text{ V}$, $-I_C = 1\text{ mA}$	$-V_{BE(on)}$	0.5	-	0.8	V	
Gain Bandwidth Product at $-V_{CE} = 6\text{ V}$, $-I_C = 10\text{ mA}$	f_T	50	-	-	MHz	
Collector Output Capacitance at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	2.8	-	pF	



Electrical Characteristics Curves

Fig. 1 Output Characteristics Curve

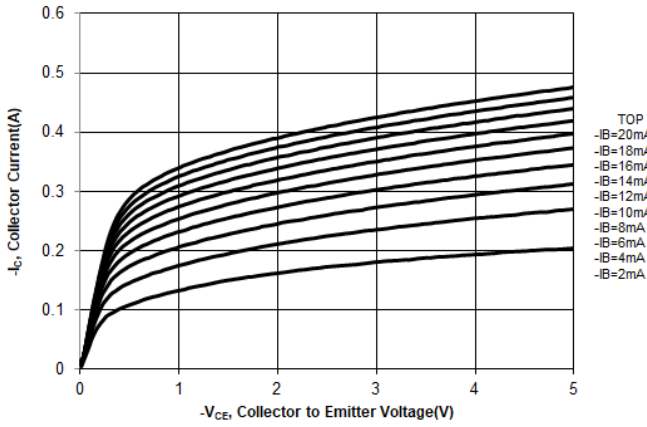


Fig. 2 Collector Current vs. Base to Emitter Voltage

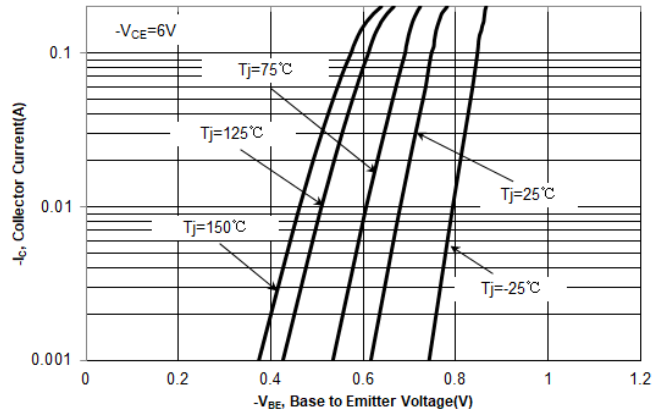


Fig. 3 DC Current Gain vs. Collector Current

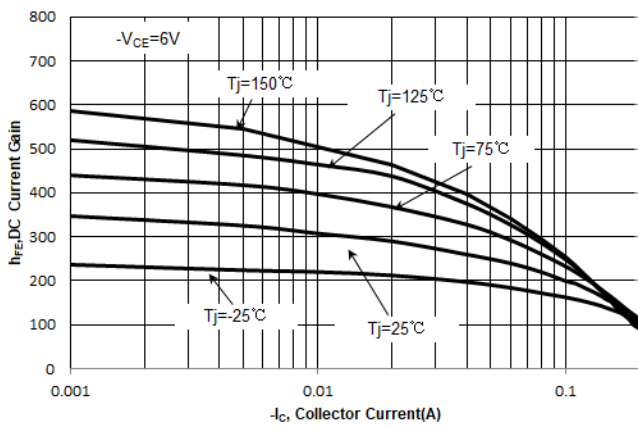
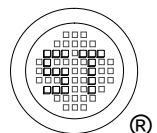
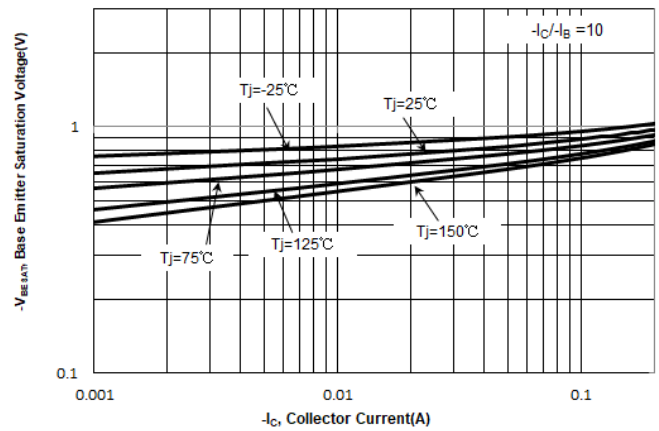


Fig. 4 V_{BESAT} vs. Collector Current



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Electrical Characteristics Curves

Fig. 5 V_{CESAT} vs. Collector Current

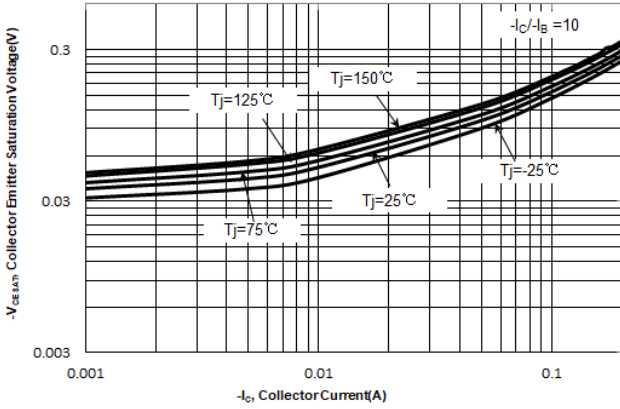


Fig. 6 Output Capacitance

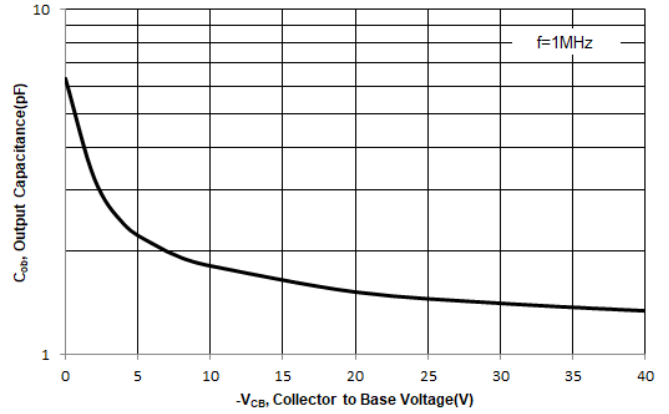
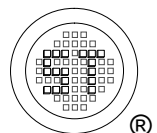
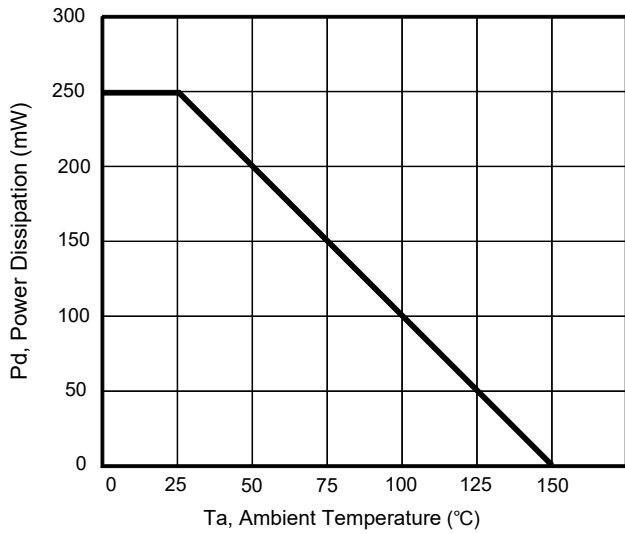
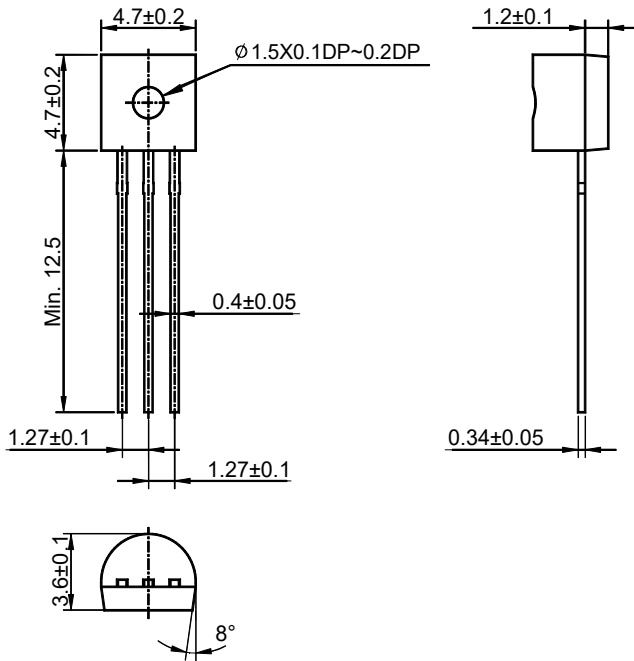


Fig. 7 Power Derating Curve

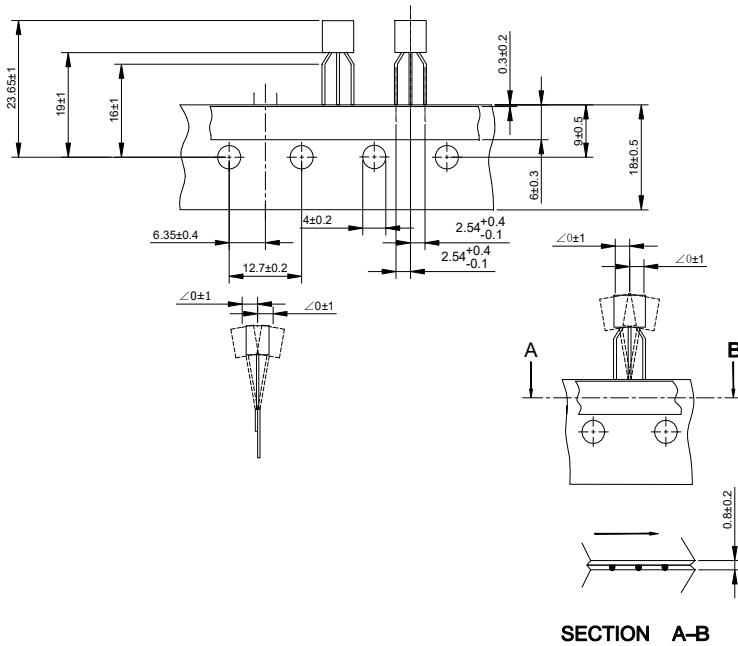


2SA733-HAF

TO-92 Package Outline (Dimensions in millimeters)



TO-92 Ammo-Pack Outline (Dimensions in millimeters)



Packing information

Package	Bulk Packing			Ammo-Packing	
	Per Bag Qty	Per Box Qty	Per Carton Qty	Per Box Qty	Per Carton Qty
TO-92	1,000	5,000	50,000	4,000	20,000

