



HJ882

NPN EPITAXIAL PLANAR TRANSISTOR

Description

The HJ882 is designed for using in output stage of 20 W audio amplifier, voltage regulator, DC-DC converter and relay driver.



TO-252

Absolute Maximum Ratings (T_A=25°C)

- Maximum Temperatures
 - Storage Temperature -55 ~ +150 °C
 - Junction Temperature +150 °C
- Maximum Power Dissipation
 - Total Power Dissipation (T_C=25°C) 10 W
- Maximum Voltages and Currents
 - BV_{CBO} Collector to Base Voltage 40 V
 - BV_{CEO} Collector to Emitter Voltage 30 V
 - BV_{EBO} Emitter to Base Voltage 5 V
 - I_C Collector Current (DC) 3 A
 - I_C Collector Current (Pulse) 7 A
 - I_B Base Current (DC) 600 mA

Thermal Characteristic

Characteristic	Symbol	Max	Unit
Thermal Resistance, junction to case	R _{θjc}	12.5	°C/W

Electrical Characteristics (T_A=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CBO}	40	-	-	V	I _C =100uA, I _E =0
BV _{CEO}	30	-	-	V	I _C =1mA, I _B =0
BV _{EBO}	5	-	-	V	I _E =10uA, I _C =0
I _{CBO}	-	-	1	uA	V _{CB} =30V, I _E =0
I _{EBO}	-	-	1	uA	V _{EB} =3V, I _C =0
*V _{CE(sat)}	-	-	0.5	V	I _C =2A, I _B =0.2A
*V _{BE(sat)}	-	1	2	V	I _C =2A, I _B =0.2A
*h _{FE1}	30	-	-		V _{CE} =2V, I _C =20mA
*h _{FE2}	100	-	500		V _{CE} =2V, I _C =1A
f _T	-	90	-	MHz	V _{CE} =5V, I _C =0.1A, f=100MHz
Cob	-	45	-	pF	V _{CB} =10V, f=1MHz

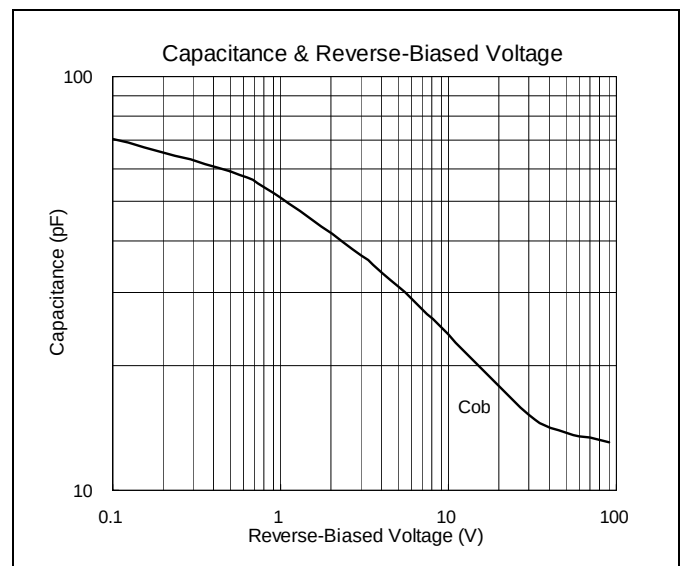
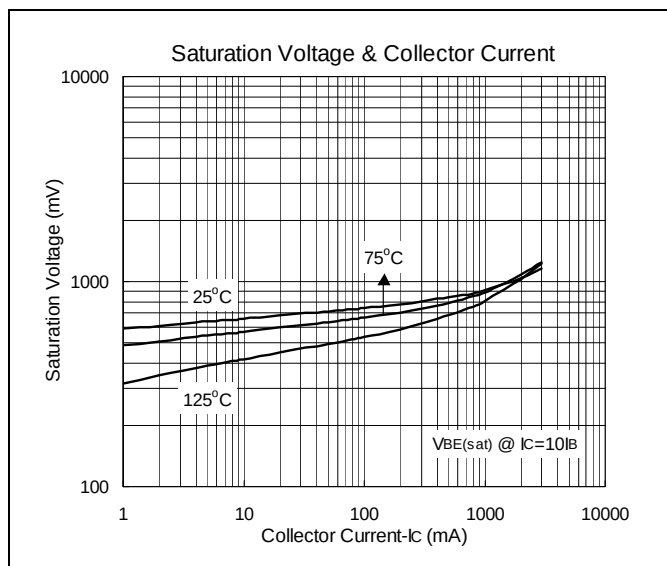
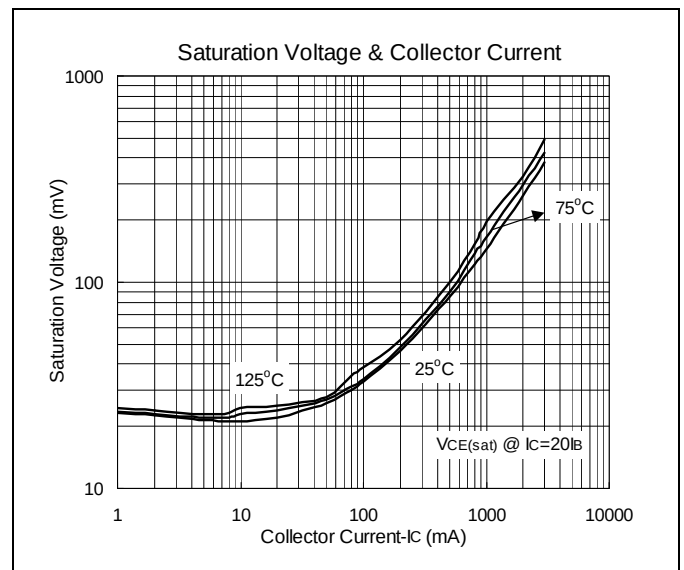
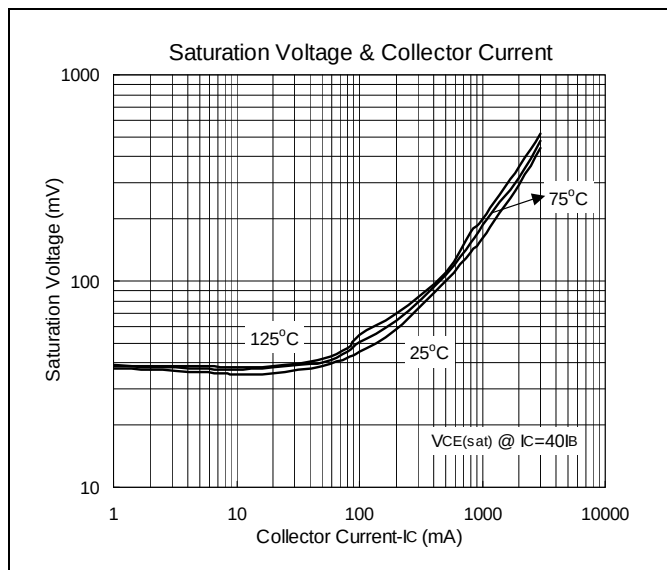
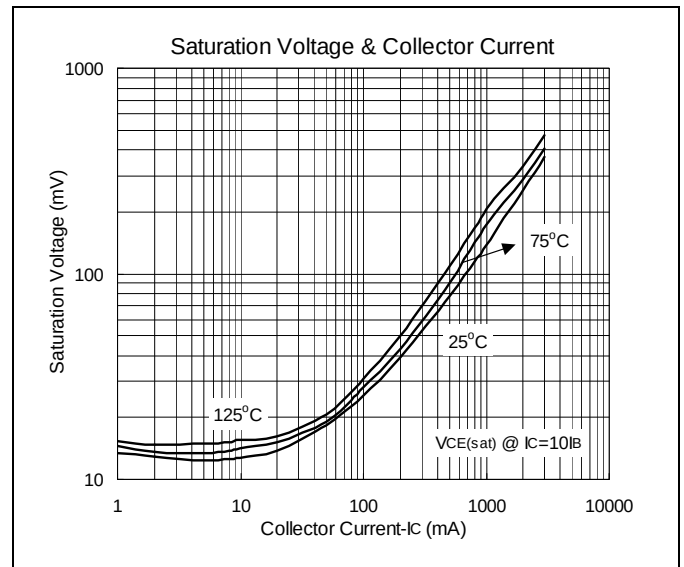
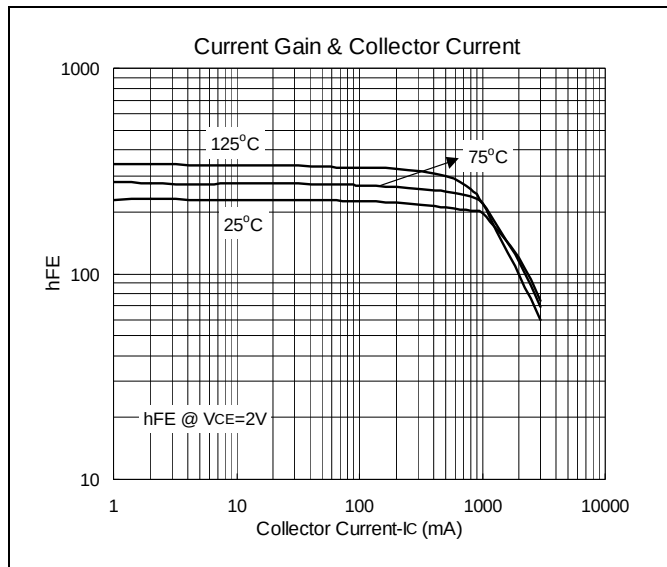
*Pulse Test: Pulse Width ≤380us, Duty Cycle≤2%

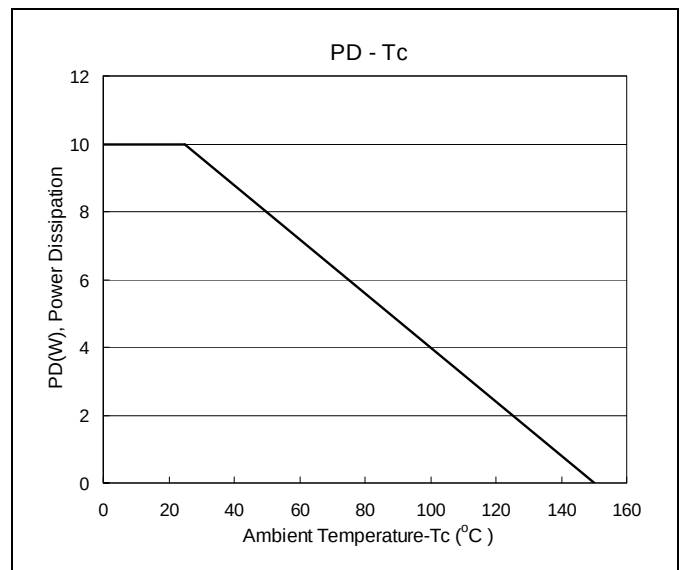
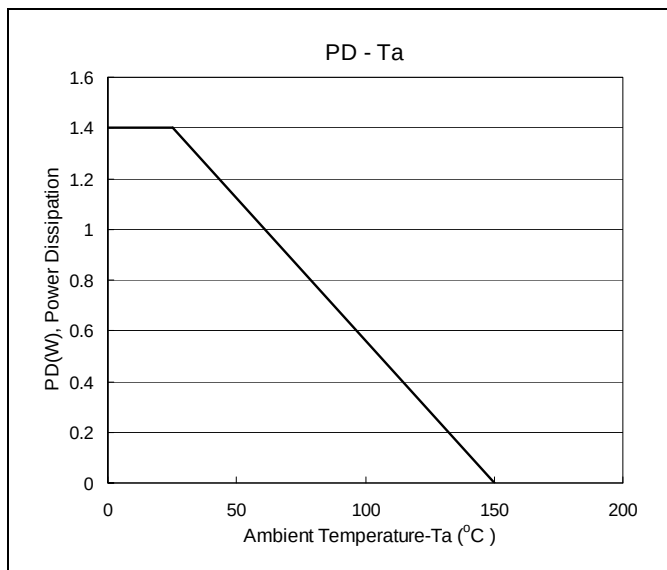
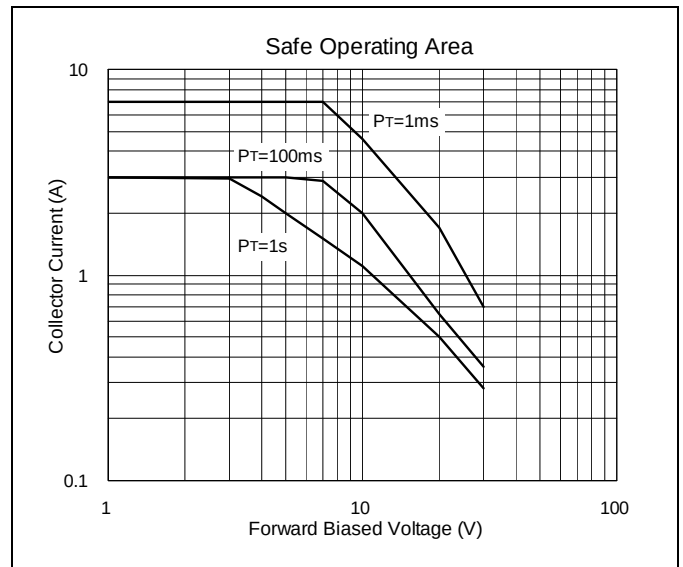
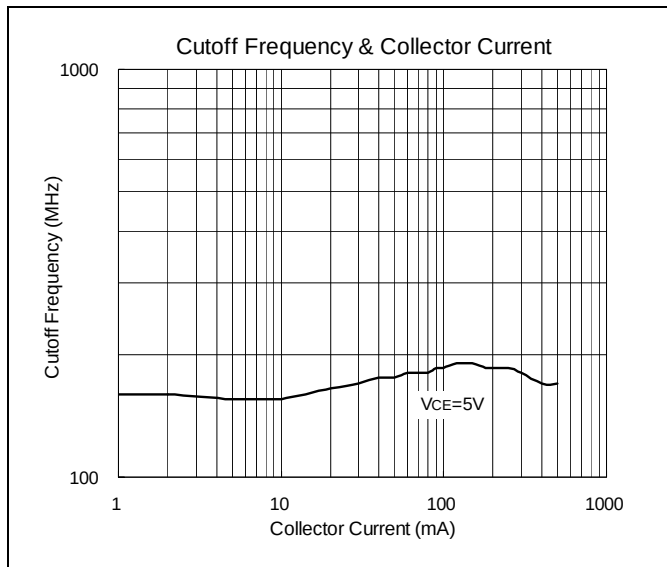
Classification Of h_{FE2}

Rank	P
Range	160-320



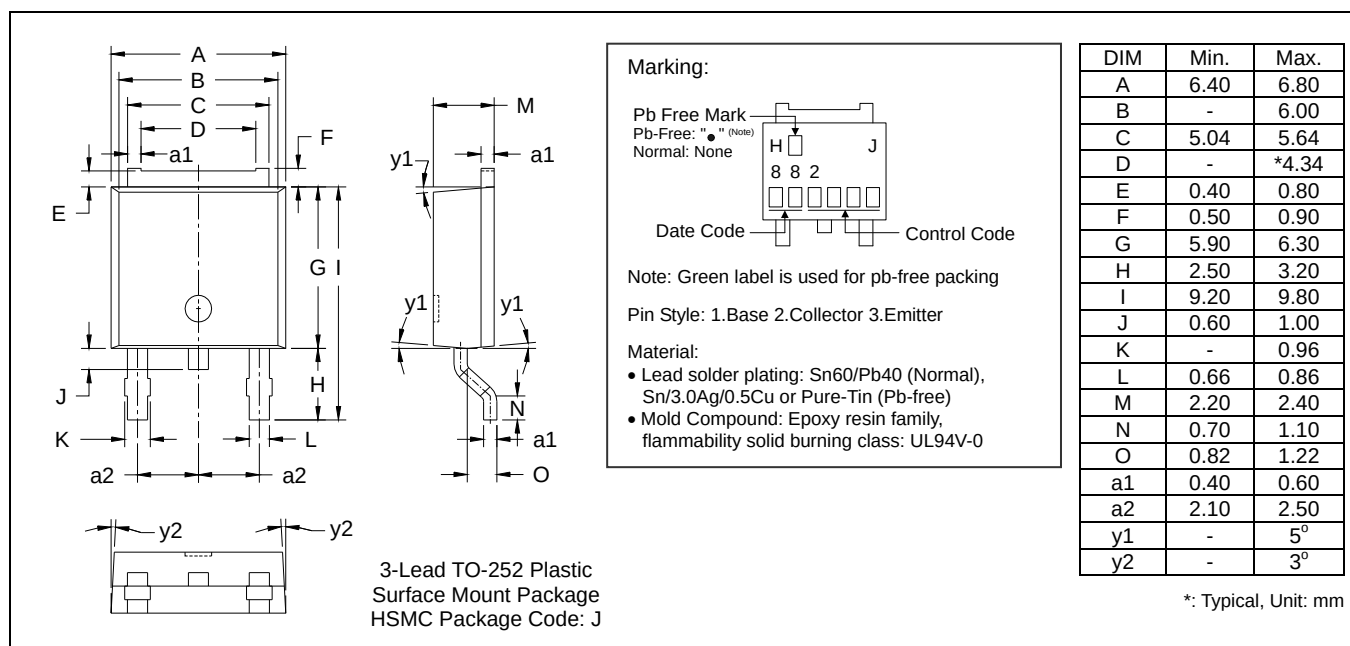
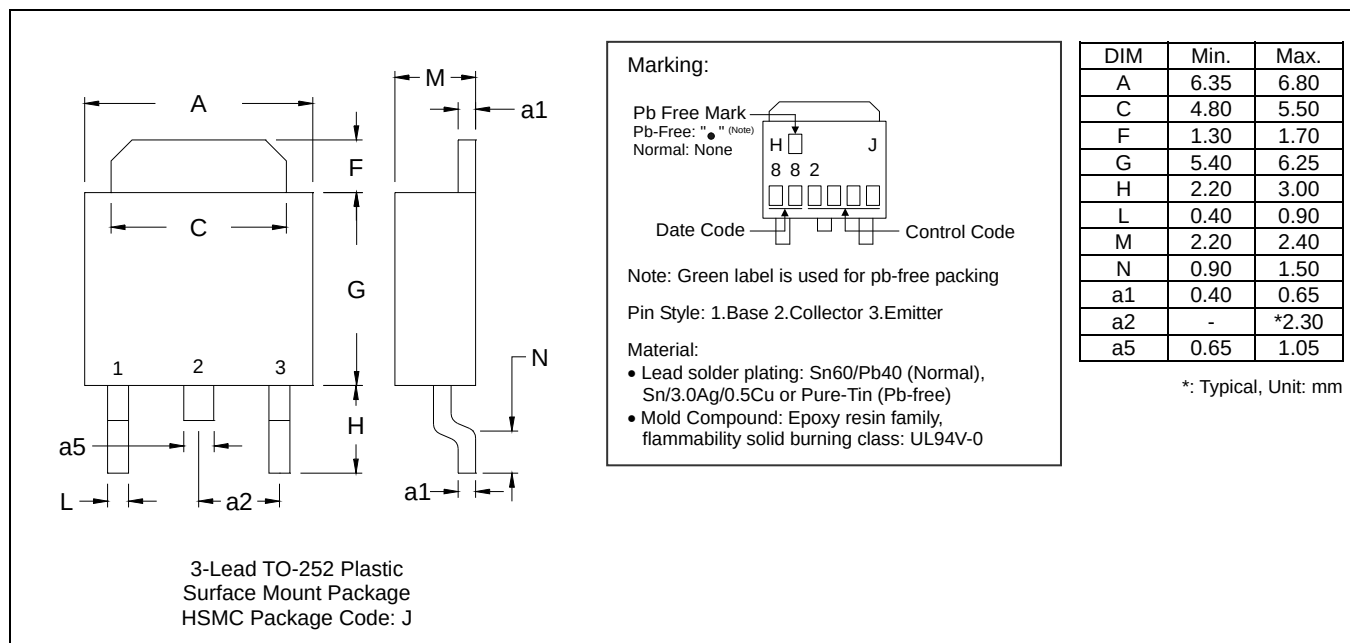
Characteristics Curve







TO-252 Dimension



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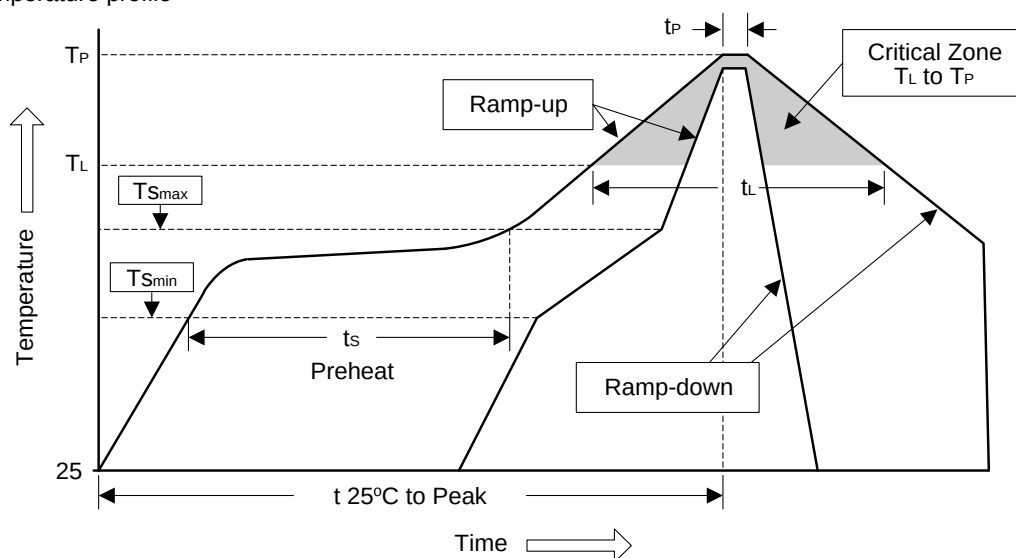
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Soldering Methods for HSMC's Products

1. Storage environment: Temperature=10°C~35°C Humidity=65%±15%
2. Reflow soldering of surface-mount devices

Figure 1: Temperature profile



Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	<3°C/sec	<3°C/sec
Preheat		
- Temperature Min (T_{smin})	100°C	150°C
- Temperature Max (T_{smax})	150°C	200°C
- Time (min to max) (t_s)	60~120 sec	60~180 sec
T_{smax} to T_L		
- Ramp-up Rate	<3°C/sec	<3°C/sec
Time maintained above:		
- Temperature (T_L)	183°C	217°C
- Time (t_L)	60~150 sec	60~150 sec
Peak Temperature (T_P)	240°C +0/-5°C	260°C +0/-5°C
Time within 5°C of actual Peak Temperature (t_P)	10~30 sec	20~40 sec
Ramp-down Rate	<6°C/sec	<6°C/sec
Time 25°C to Peak Temperature	<6 minutes	<8 minutes

3. Flow (wave) soldering (solder dipping)

Products	Peak temperature	Dipping time
Pb devices.	245°C ±5°C	10sec ±1sec
Pb-Free devices.	260°C ±5°C	10sec ±1sec