

Features

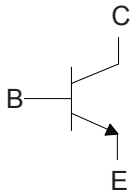
- Low Frequency Power Amplifier
- Complementary Pair with 2SB647/A
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings @ 25°C Unless Otherwise Specified

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 139°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	120	V
Collector-Emitter Voltage	V_{CEO}	80	V
Emitter-Base Voltage	V_{EBO}	5	V
Continuous Collector Current	I_C	1	A
Power Dissipation	P_D	900	mW

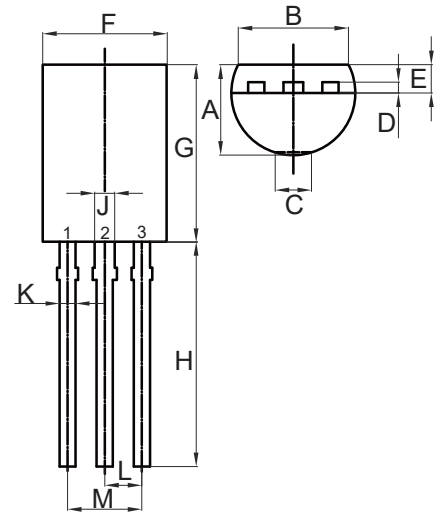
Internal Structure



- 1.EMITTER
- 2.COLLECTOR
- 3.BASE

**NPN
Plastic-Encapsulate
Transistor**

TO-92L



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.146	0.161	3.70	4.10	
B	0.157	----	4.00	----	
C	0.000	0.063	0.00	1.60	
D	0.014	0.018	0.35	0.45	
E	0.050	0.062	1.28	1.58	
F	0.185	0.201	4.70	5.10	
G	0.307	0.323	7.80	8.20	
H	0.543	0.559	13.80	14.20	
J	0.024	0.031	0.60	0.80	
K	0.014	0.022	0.35	0.55	
L	0.050		1.27		Straight Lead
	0.086	0.110	2.20	2.80	Bent Lead
M	0.096	0.104	2.44	2.64	Straight Lead
	0.173	0.220	4.40	5.60	Bent Lead

Electrical Characteristics @ $T_A=25^\circ\text{C}$ Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	120			V	$I_C=10\mu\text{A}, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	80			V	$I_C=1\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	$I_E=10\mu\text{A}, I_C=0$
Collector-Base Cutoff Current	I_{CBO}			10	μA	$V_{CB}=100\text{V}, I_E=0$
Emitter-Base Cutoff Current	I_{EBO}			10	μA	$V_{EB}=4\text{V}, I_C=0$
DC Current Gain	$h_{FE(1)}$	60		320		$V_{CE}=5\text{V}, I_C=150\text{mA}$
	$h_{FE(2)}$	30				$V_{CE}=5\text{V}, I_C=-500\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			1.0	V	$I_C=500\text{mA}, I_B=50\text{mA}$
Base-Emitter Voltage	V_{BE}			1.5	V	$V_{CE}=5\text{V}, I_C=150\text{mA}$
Transition Frequency	f_T		140		MHz	$V_{CE}=5\text{V}, I_C=150\text{mA}$
Collector-Base Capacitance	C_{cb}		12		pF	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$

Classification of $h_{FE(1)}$

Rank	B	C	D
Range	60-120	100-200	160-320

Curve Characteristics

Fig. 1 - Static Characteristics

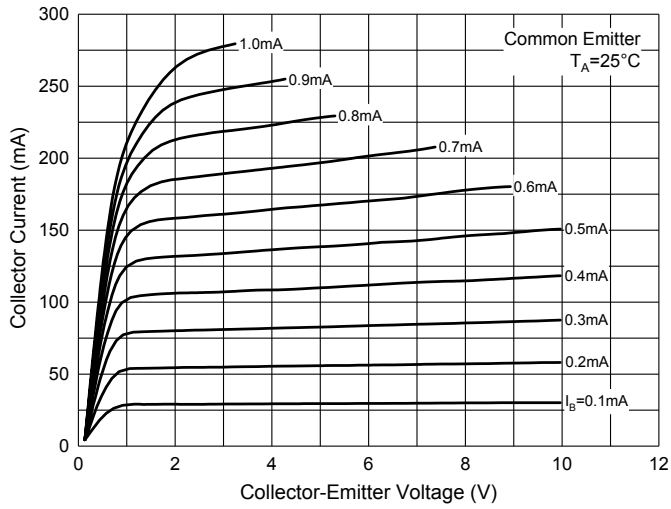


Fig. 2 - DC Current Gain Characteristics

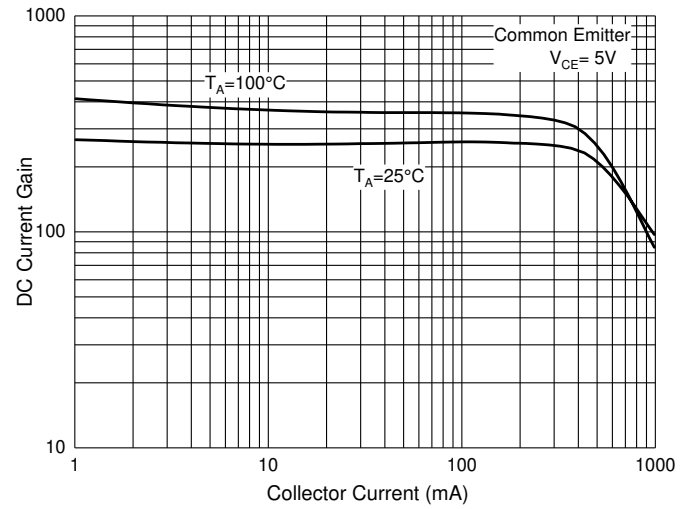


Fig. 3 - Base-Emitter Saturation Voltage Characteristics

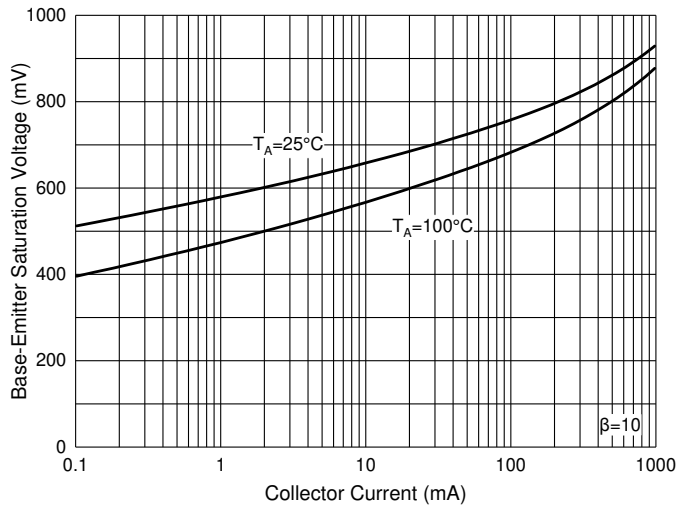


Fig. 4 - Collector-Emitter Saturation Voltage Characteristics

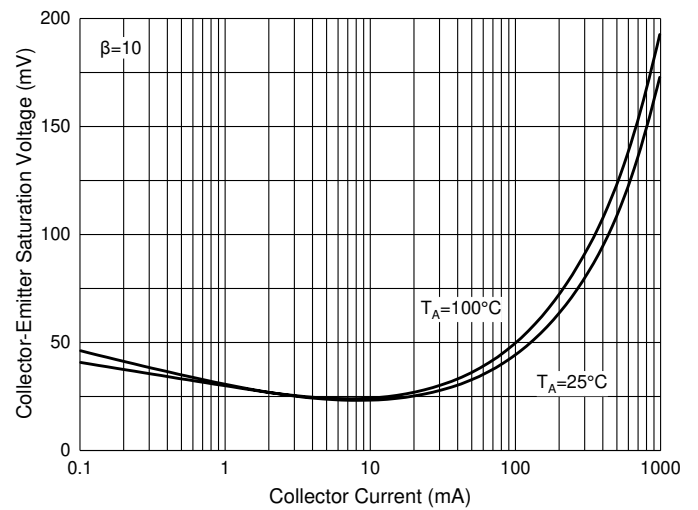


Fig. 5 - Base-Emitter Voltage Characteristics

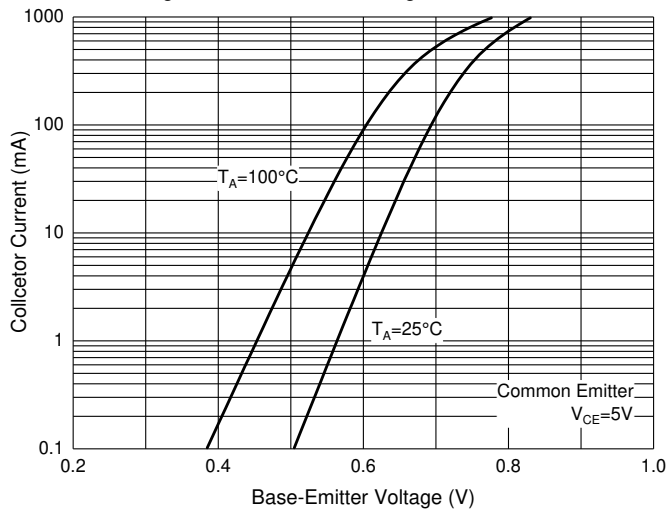
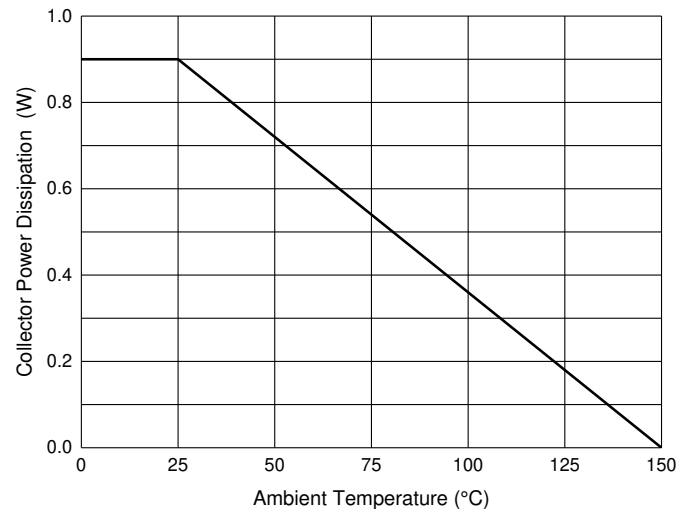


Fig. 6 - Collector Power Derating Curve



Ordering Information

Device	Packing
Part Number-AP	Ammo Packing: 2Kpcs/Ammo Box
Part Number-BP	Bulk: 50Kpcs/Carton

Note : Adding "-HF" Suffix for Halogen Free, eg. Part Number-TP-HF

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