

Features

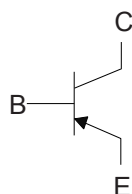
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

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: 208°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Continuous Collector Current	I_C	-200	mA
Power Dissipation	P_D	600	mW

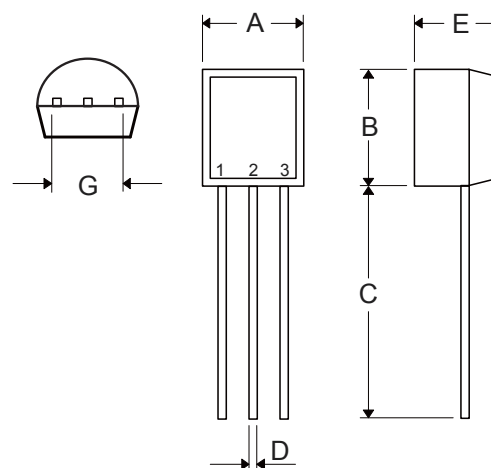
Internal Structure



1.EMITTER
2.BASE
3.COLLECTOR

PNP General Purpose Amplifier

TO-92



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.169	0.185	4.30	4.70	
B	0.169	0.185	4.30	4.70	
C	0.500	-----	12.70	-----	
D	0.015	0.022	0.38	0.55	
E	0.130	0.146	3.30	3.70	
G	0.095	0.105	2.42	2.67	Straight Lead
	0.173	0.220	4.40	5.60	Bent

Electrical Characteristics @ T_A=25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	V _{(BR)CBO}	-40			V	I _C =-10μA, I _E =0
Collector-Emitter Breakdown Voltage*	V _{(BR)CEO}	-40			V	I _C =-1mA, I _B =0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	-5			V	I _E =-10μA, I _C =0
Base Cutoff Current	I _{BL}			-0.05	μA	V _{CE} =-30V, V _{BE} =-3V
Collector Cut-off Current	I _{CEx}			-0.05	μA	V _{CE} =-30V, V _{BE} =-3V
DC Current Gain*	h _{FE(1)}	60				V _{CE} =-1V, I _C =-0.1mA
	h _{FE(2)}	80				V _{CE} =-1V, I _C =-1mA
	h _{FE(3)}	100		300		V _{CE} =-1V, I _C =-10mA
	h _{FE(4)}	60				V _{CE} =-1V, I _C =-50mA
	h _{FE(5)}	30				V _{CE} =-1V, I _C =-100mA
Collector-Emitter Saturation Voltage	V _{CE(sat)}			-0.25	V	I _C =-10mA, I _B =-1mA
				-0.4	V	I _C =-50mA, I _B =-5mA
Base-Emitter Saturation Voltage	V _{BE(sat)}		-0.65	-0.85	V	I _C =-10mA, I _B =-1mA
				-0.95	V	I _C =-50mA, I _B =-5mA
Transition Frequency	f _T	250			MHz	V _{CE} =-20V, I _C =-10mA, f=100MHz)
Delay Time	t _d			35	ns	V _{CC} =-3V, V _{BE} =-0.5V, I _C =-10mA, I _{B1} =-
Rise Time	t _r			35	ns	1mA
Storage Time	t _s			225	ns	V _{CC} =-3V, I _C =-10mA, I _{B1} =I _{B2} =-1mA
Fall Time	t _f			75	ns	

*.Pulse test: Pulse Width≤300μs,Duty Cycle≤2.0%.

Curve Characteristics

Fig. 1 - Static Characteristics

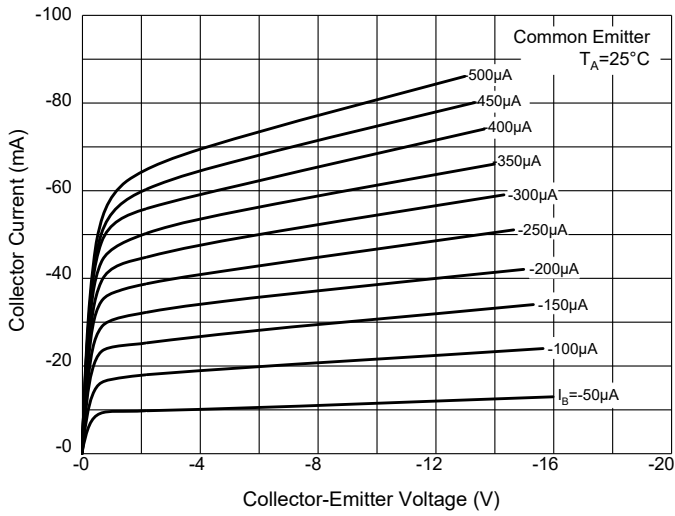


Fig. 2 - DC Current Gain Characteristics

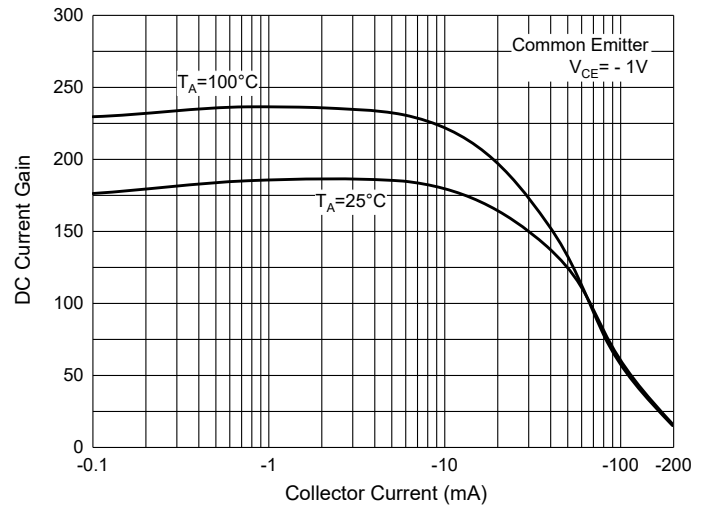


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

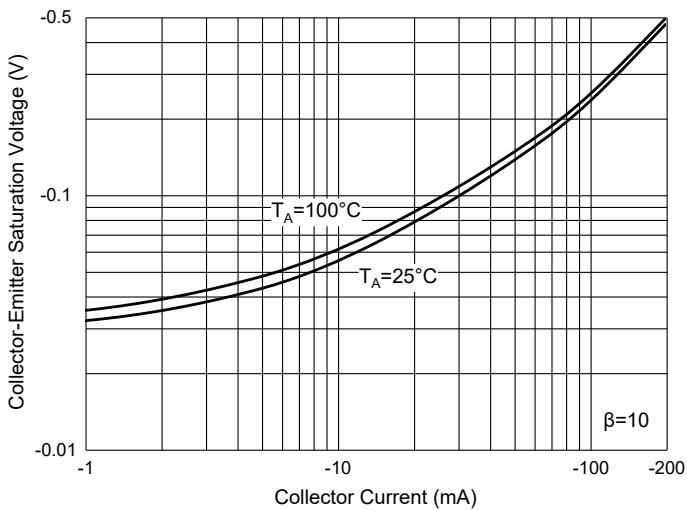


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

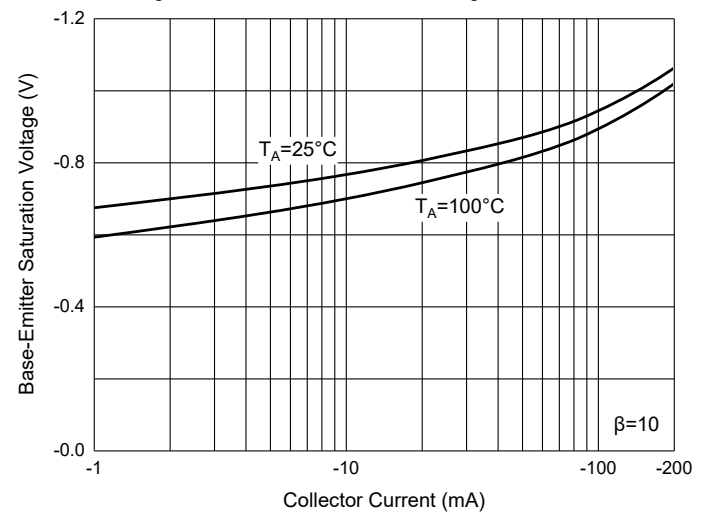


Fig. 5 - Base-Emitter Voltage Characteristics

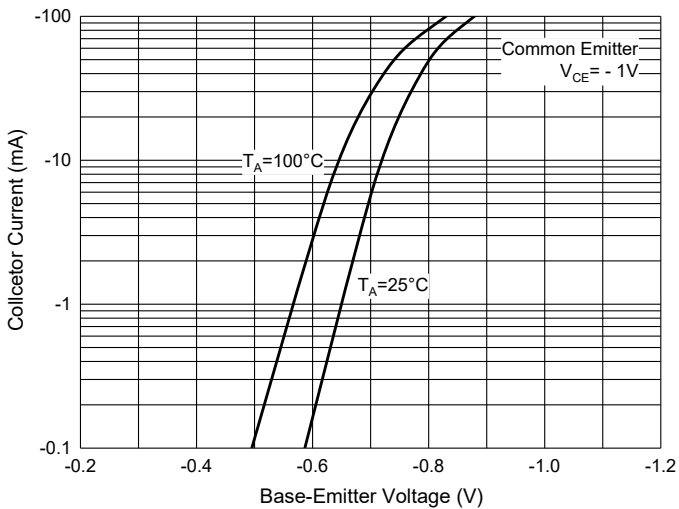
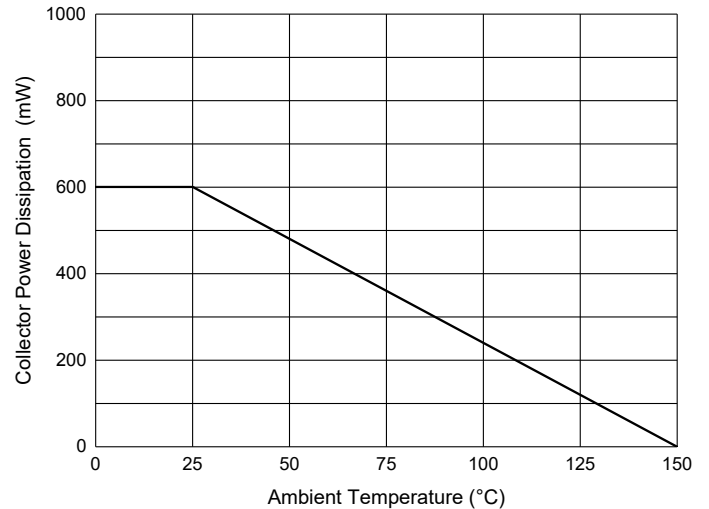


Fig. 6 - Collector Power Derating Curve



Ordering Information

Device	Packing
Part Number-AP	Ammo Packing: 20Kpcs/Carton
Part Number-BP	Bulk: 1k/Bag, 100K/Ctn;

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

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