NPN General-purpose Double Transistor

Features

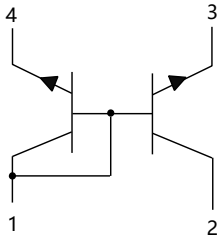
- Low Current
- Low Voltage
- Matched Pairs
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings @ 25°C Unless Otherwise Specified

- Operating Junction Temperature Range: -65℃ to +150℃
- Storage Temperature Range: -65℃ to +150℃
- Thermal Resistance: 500℃/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Base Voltage	V_{EBO}	6	V
Continuous Collector Current	I_C	0.1	A
Peak Collector Current	I_{CM}	0.2	mA
Power Dissipation	P_D	250	mW

Internal Structure



Marking: 61C

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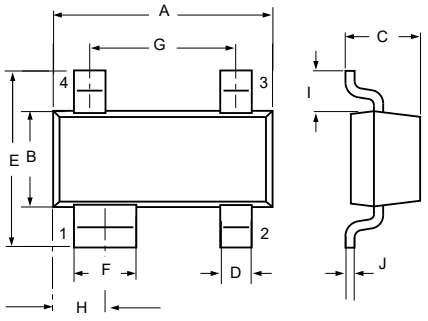


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.047	0.055	1.20	1.39	
C	0.031	0.048	0.80	1.22	
D	0.011	0.020	0.30	0.51	
E	0.082	0.104	2.10	2.64	
F	0.029	0.037	0.76	0.94	
G	0.070	0.080	1.78	2.03	
H	0.028	0.033	0.72	0.83	
I	0.015	0.024	0.40	0.60	
J	0.003	0.008	0.08	0.20	

Electrical Characteristics @ T_A=25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	30			V	I_C=100μA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	30			V	I_C=10mA, I_B=0
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6			V	I_E=100μA, I_C=0
Collector-Base Cutoff Current	I_{CBO}			15	nA	V_{CB}=30V, I_E=0
Emitter-Base Cutoff Current	I_{EBO}			100	nA	V_{EB}=5V, I_C=0
DC Current Gain	$h_{FE(1)}$	100				V_{CE}=5V, I_C=100μA
	$h_{FE(2)}$	420		800		V_{CE}=5V, I_C=2mA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.25	V	I_C=10mA, I_B=0.5mA
				0.60	V	I_C=100mA, I_B=5mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		0.7		V	I_C=10mA, I_B=0.5mA
			0.9		V	I_C=100mA, I_B=5mA
Base-Emitter Turn−on Voltage	$V_{BE(on)}$	0.58	0.62	0.70	V	V_{CE}=5V, I_C=2mA
				0.77	V	V_{CE}=5V, I_C=10mA
Transition Frequency	f_T	100			MHz	V_{CE}=5V,I_C=10mA,f=100MHz
Collector Output Capacitance	C_{ob}		2.5		pF	V_{CB}=10V,I_E=0,f=1MHz
V_{BE} Matching	$\lvert V_{BE1}-V_{BE2}\rvert$			0.045	V	V_{CE}=5V, I_C=2mA

Curve Characteristics

Fig. 1 - DC Current Gain Characteristics

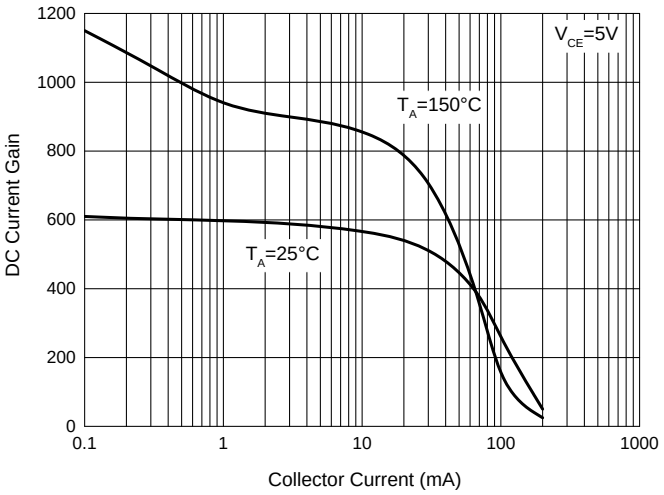


Fig. 2 - Base-Emitter Voltage Characteristics

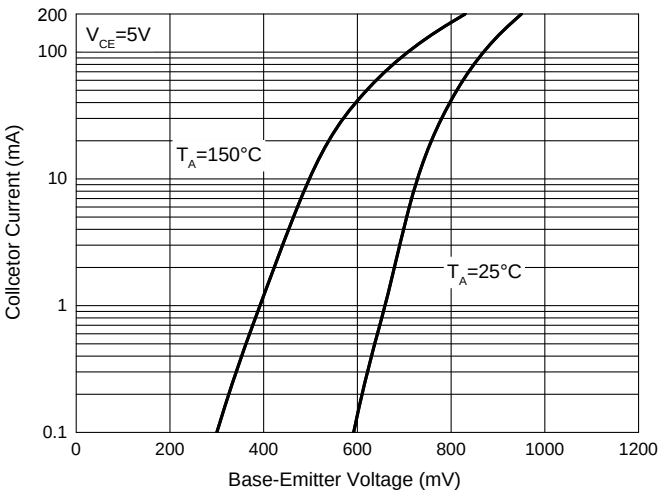


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

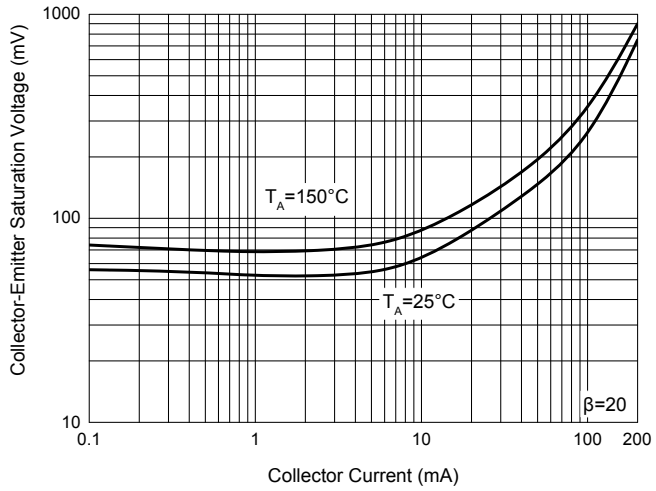
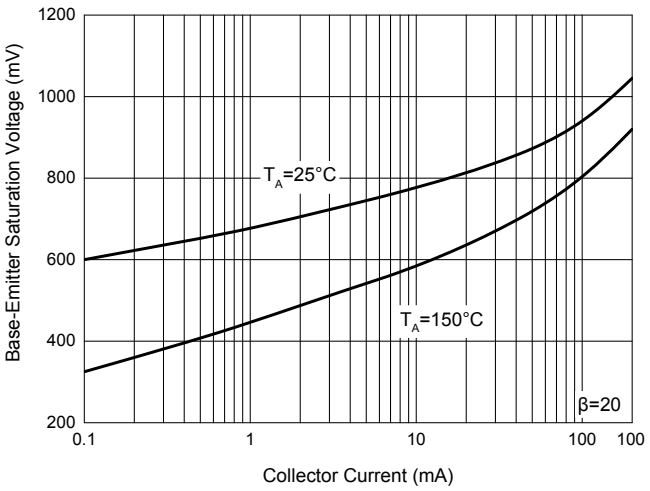


Fig. 4 - Base-Emitter Saturation Voltage Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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