

Features

- High h_{FE}
- For AF Input Stages and Drive Applications
- Halogen Free. "Green" Device (Note 1)
- 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

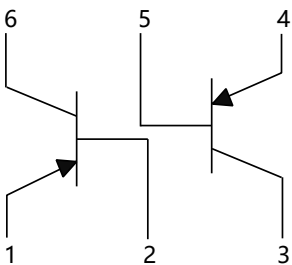
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 417°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-45	V
Emitter-Base Voltage	V_{EBO}	-5	V
Continuous Collector Current	I_C	-500	mA
Power Dissipation	P_D	300	mW

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

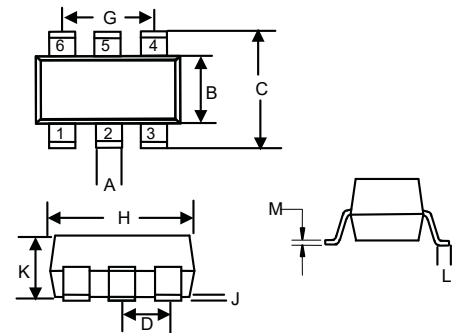
Marking: S5B

Internal Structure



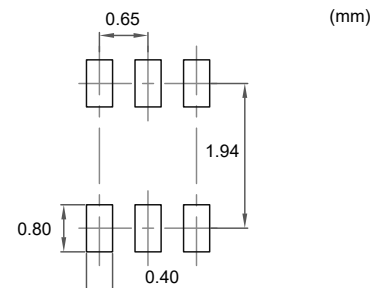
Dual PNP Transistor

SOT-363



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.006	0.014	0.15	0.35	
B	0.045	0.053	1.15	1.35	
C	0.079	0.096	2.00	2.45	
D	0.026		0.65		TYP.
G	0.047	0.055	1.20	1.40	
H	0.071	0.087	1.80	2.20	
J	----	0.004	----	0.10	
K	0.031	0.043	0.80	1.10	
L	0.010	0.018	0.26	0.46	
M	0.003	0.006	0.08	0.15	

Suggested Solder Pad Layout



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

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-50			V	$I_C=-10\mu\text{A}, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-45			V	$I_C=-10\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E=-10\mu\text{A}, I_C=0$
Collector Cutoff Current	I_{CBO}			-0.1	μA	$V_{CB}=-25\text{V}, I_E=0$
Emitter Cutoff Current	I_{EBO}			-0.1	μA	$V_{EB}=-4\text{V}, I_C=0$
DC Current Gain ⁽²⁾	$h_{FE(1)}$	160		400		$V_{CE}=-1\text{V}, I_C=-100\text{mA}$
	$h_{FE(2)}$	40				$V_{CE}=-1\text{V}, I_C=-500\text{mA}$
Collector-Emitter Saturation Voltage ⁽²⁾	$V_{CE(sat)}$			-0.7	V	$I_C=-500\text{mA}, I_B=-50\text{mA}$
Base-Emitter Saturation Voltage ⁽²⁾	$V_{BE(sat)}$			-1.2	V	$I_C=-500\text{mA}, I_B=-50\text{mA}$
Transition Frequency	f_T		200		MHz	$V_{CE}=-5\text{V}, I_C=-50\text{mA}, f=20\text{MHz}$
Collector-Base Capacitance	C_{cb}		10		pF	$V_{CB}=-10\text{V}, f=1\text{MHz}$
Emitter-Base Capacitance	C_{eb}		60		pF	$V_{EB}=-0.5\text{V}, f=1\text{MHz}$

Note: 2. Pulse test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$.

Curve Characteristics

Fig. 1 - Static Characteristics

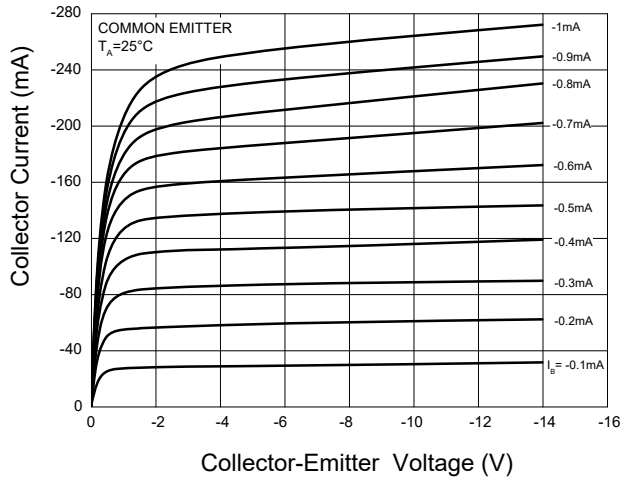


Fig. 2 - DC Current Gain Characteristics

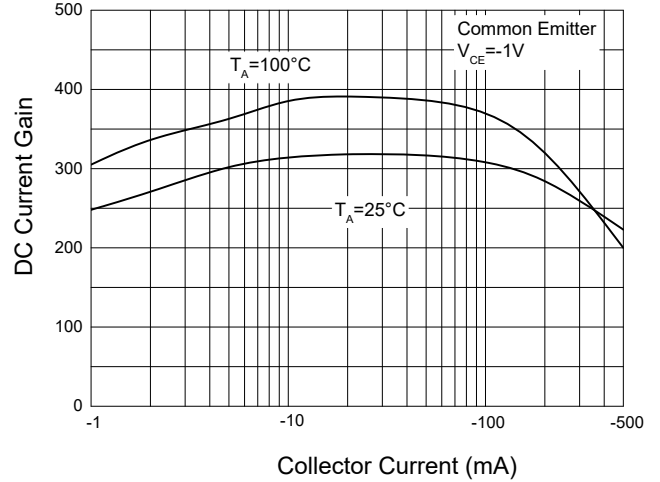


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

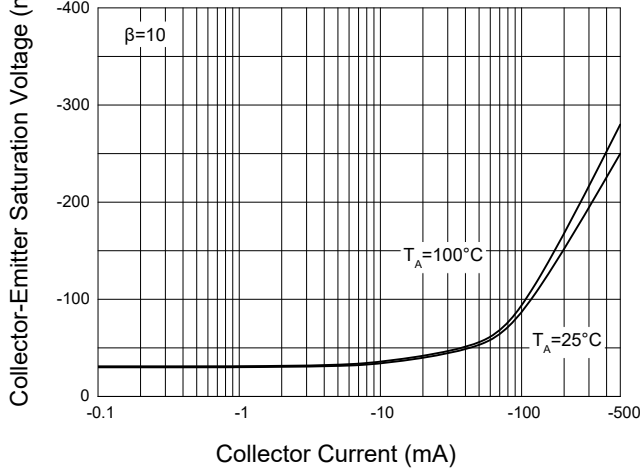


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

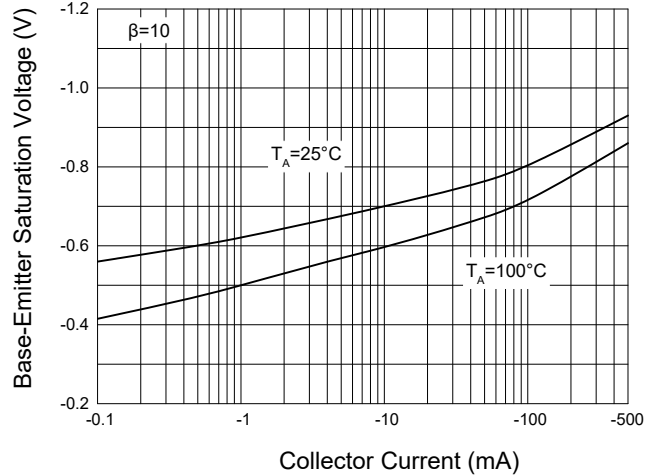


Fig. 5 - Base-Emitter Voltage Characteristics

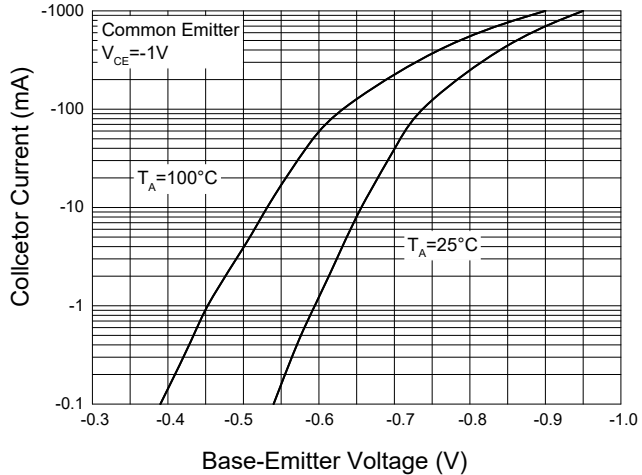
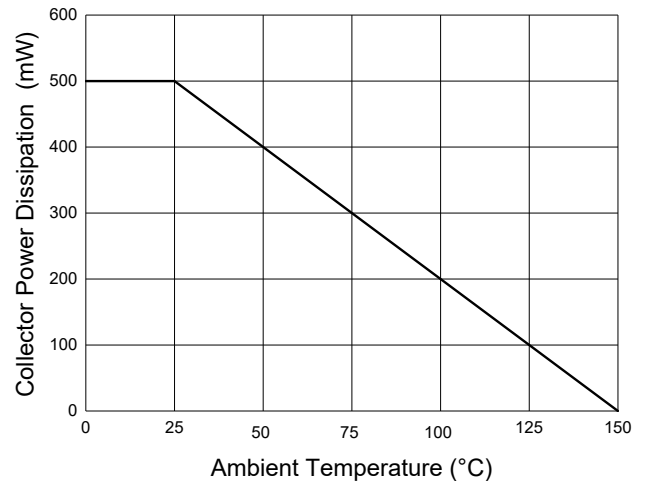


Fig. 6 - Collector Power Derating Curve



Ordering Information

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

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