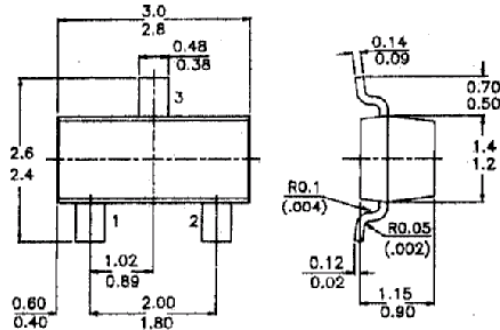
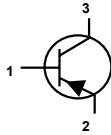


PNP Silicon Planar Epitaxial Transistors

Pin configuration:
1. BASE
2. EMITTER
3. COLLECTOR



SOT-23 SMD Package

Unit: mm

Absolute Maximum Ratings (Ta = 25 °C unless specified otherwise)

DESCRIPTION	SYMBOL	CMBT2907	CMBT2907A	UNITS
Collector Emitter Voltage	$-V_{CEO}$	40	60	V
Collector Base Voltage	$-V_{CBO}$	60	60	
Emitter Base Voltage	$-V_{EBO}$	5.0	5.0	
Collector Current	$-I_C$	600		mA
Power dissipation up to Tamb = 25 °C	P_{tot}	250		mW
Storage Temperature	T_{stg}	-55 to +150		°C
Junction Temperature	T_j	150		
DC Current Gain $-V_{CE} = 10V$ $-I_C = 500mA$	h_{FE}	> 30	> 50	
Turn-off switching time $-I_{Con} = 150 mA$; $-I_{BOn} = I_{BOff} = 15 mA$	t_{off}	< 100		ns
Transition frequency at f = 100 MHz $-I_C = 50 mA$; $-V_{CE} = 20 V$	f_T	> 200		MHz

Thermal Characteristics

Junction to Ambient in free air	$R_{th(j-a)}$	500	K/W
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Electrical Characteristics (at Ta=25 °C unless otherwise specified)

DESCRIPTION	SYMBOL	CONDITIONS	CMBT2907	CMBT2907A	UNITS
Collector Cut Off Current	$-I_{CBO}$	$I_E = 0, -V_{CB} = 50V$	< 20	< 10	nA
	$-I_{CBO}$	$I_E = 0, -V_{CB} = 50V, T_j = 125^\circ C$	< 20	< 10	uA
	$-I_{CEX}$	$-V_{EB} = 0.5V, -V_{CE} = 30V$	< 50		
Base Current w/reverse biased emitter junction	$-I_{BEX}$	$-V_{EB} = 3V, -V_{CE} = 30V$	< 50		nA
Saturation Voltages	$-V_{CE(Sat)}$	$-I_C = 150mA, -I_B = 15mA$	< 0.4		V
	$-V_{BE(Sat)}$		< 1.3		
	$-V_{CE(Sat)}$	$-I_C = 500mA, -I_B = 50mA$	< 1.6		
	$-V_{BE(Sat)}$		< 2.6		
Collector-base breakdown voltage	$-V_{(BR)CBO}$	Open emitter; $-I_C = 10uA, I_E = 0$	> 60		
Collector-emitter breakdown voltage	$-V_{(BR)CEO}$	Open base; $-I_C = 10mA, I_B = 0$	> 40	> 60	
Emitter-base breakdown voltage	$-V_{(BR)EBO}$	Open collector; $-I_E = 10uA, I_C = 0$	> 5.0		

PNP Silicon Planar Epitaxial Transistors

DC Current Gain	h_{FE}	- $V_{CE} = 10V$, - $I_C = 0.1mA$ - $V_{CE} = 10V$, - $I_C = 1mA$ - $V_{CE} = 10V$, - $I_C = 10mA$ - $V_{CE} = 10V$, - $I_C = 150mA$ - $V_{CE} = 10V$, - $I_C = 500mA$	> 35 > 50 > 75 100 to 300 > 30	> 75 > 100 > 100 > 50	
Transition Frequency at $f = 100$ MHz	f_T	- $V_{CE} = 20V$, - $I_C = 50mA$	> 200		MHz
Output Capacitance at $f = 1$ MHz	C_O	- $V_{CB} = 10V$, $I_E = I_C = 0$	< 8.0		pF
Input Capacitance at $f = 1$ MHz	C_i	- $V_{EB} = 2V$, $I_C = I_E = 0$	< 30		pF
Switching times (between 10% and 90%) Turn-on time when switched to		- $I_C = 150mA$, - $I_B = 15mA$, $V_{CC} = 30V$			
delay time	t_d		< 10		
rise time	t_r		< 40		ns
turn on time ($t_d + t_r$)	t_{on}		< 45		
Turn-off time when switched from to cut-off with + $I_{BM} = 15$ mA		- $I_C = 150mA$, - $I_B = 15mA$, $V_{CC} = 6V$			
storage time	t_s		< 80		
fall time	t_f		< 30		ns
turn off time ($t_s + t_f$)	t_{off}		< 100		