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[Comchip Technology](#)
[2N3906-G](#)

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General Purpose Transistor

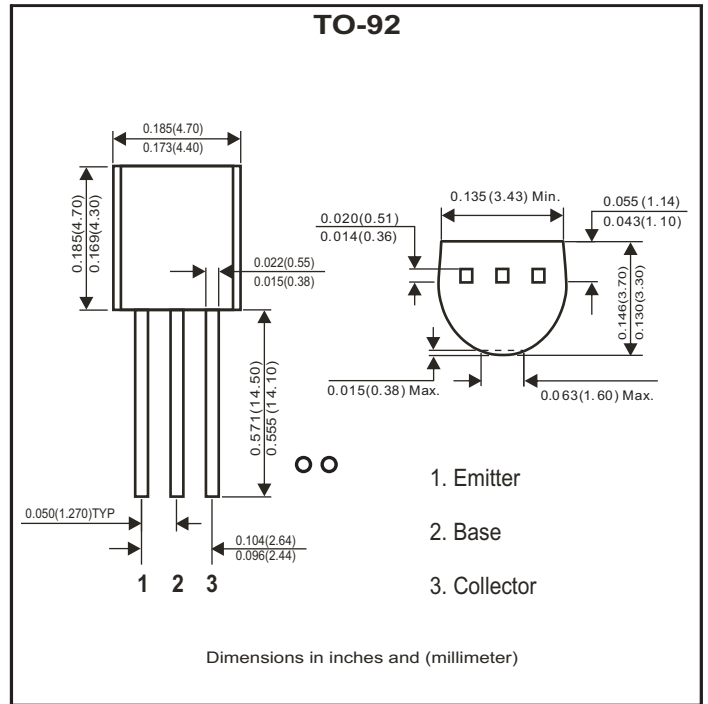
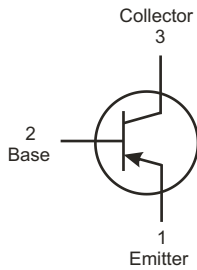


2N3906-G (PNP)

RoHS Device

Features

- PNP silicon epitaxial planar transistor for switching and amplifier application.
- As complementary type, the NPN transistor 2N3904-G is recommended.
- This transistor is available in the SOT-23 case with the type designation MMBT3906-G.



Maximum Ratings (at TA=25°C unless otherwise noted)

Parameter	Symbol	Min	Max	Unit
Collector-Base voltage	V _{CBO}		-40	V
Collector-Emitter voltage	V _{CEO}		-40	V
Emitter-Base voltage	V _{EBO}		-5	V
Collector Current-Continuous	I _c		-0.2	A
Collector Dissipation	P _c		0.625	W
Storage Temperature and Junction Temperature	T _{STG} , T _J	-55	+150	°C

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Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Max	Unit
Collector-Base breakdown voltage	$I_C = -10\mu A$, $I_E = 0$	$V_{(BR)CBO}$	-40		V
Collector-Emitter breakdown voltage	$I_C = -1mA$, $I_B = 0$	$V_{(BR)CEO}$	-40		V
Emitter-Base breakdown voltage	$I_E = -10\mu A$, $I_C = 0$	$V_{(BR)EBO}$	-5		V
Collector cut-off current	$V_{CB} = -40V$, $I_E = 0$	I_{CBO}		-0.1	μA
Collector cut-off current	$V_{CE} = -30V$, $V_{BE(off)} = -3V$	I_{CEX}		-50	μA
Emitter cut-off current	$V_{EB} = -5V$, $I_C = 0$	I_{EBO}		-0.1	μA
DC current gain	$V_{CE} = -1V$, $I_C = -10mA$	$h_{FE(1)}$	100	400	
	$V_{CE} = -1V$, $I_C = -50mA$	$h_{FE(2)}$	60		
	$V_{CE} = -1V$, $I_C = -100mA$	$h_{FE(3)}$	30		
Collector-Emitter saturation voltage	$I_C = -50mA$, $I_B = -5mA$	$V_{CE(sat)}$		-0.4	V
Base-emitter saturation voltage	$I_C = -50mA$, $I_B = -5mA$	$V_{BE(sat)}$		-0.95	V
Transition frequency	$V_{CE} = -20V$, $I_C = -10mA$ $f = 100MHz$	f_T	250		MHz
Delay time	$V_{CC} = -3V$, $V_{BE} = -0.5V$	t_d		35	nS
Rise time	$I_C = -10mA$, $I_{B1} = -1mA$	t_r		35	nS
Storage time	$V_{CC} = -3V$, $I_C = -10mA$	t_s		225	nS
Fall time	$I_{B1} = I_{B2} = -1mA$	t_f		75	nS

Classification of $h_{FE(1)}$

Rank	O	Y	G
Range	100-200	200-300	300-400

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RATING AND CHARACTERISTIC CURVES (2N3906-G)

Fig.1 - I_c - V_{ce}

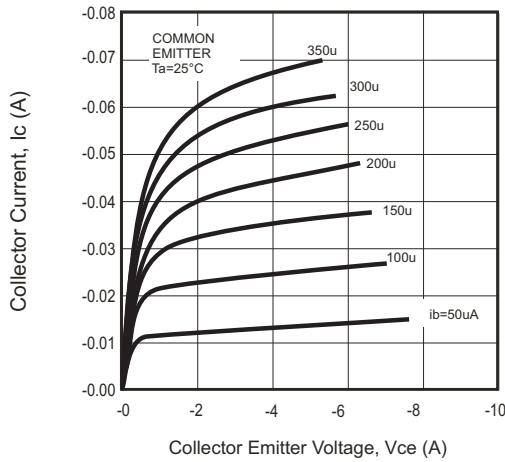


Fig.2 - V_{ce} - I_c

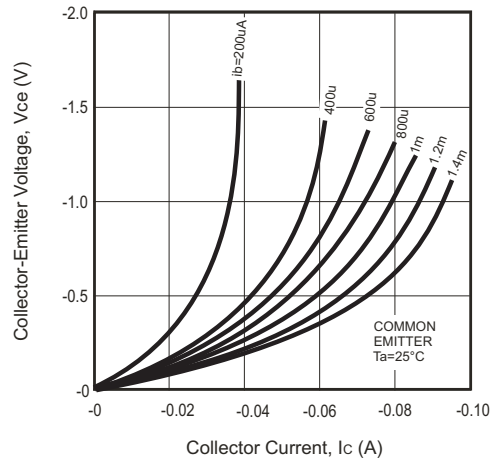


Fig.3 - $V_{ce(sat)}$ - I_c
 $V_{be(sat)}$ - I_c

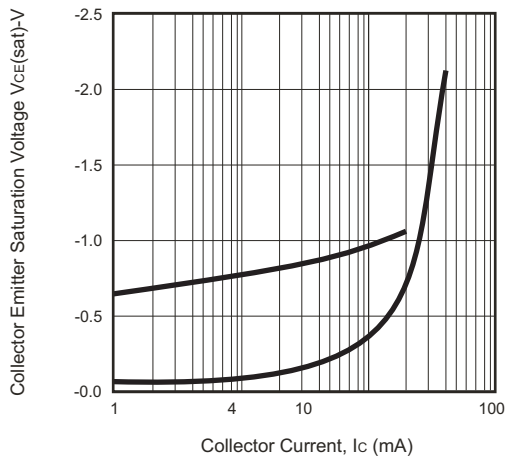


Fig.4 - h_{FE} - I_c

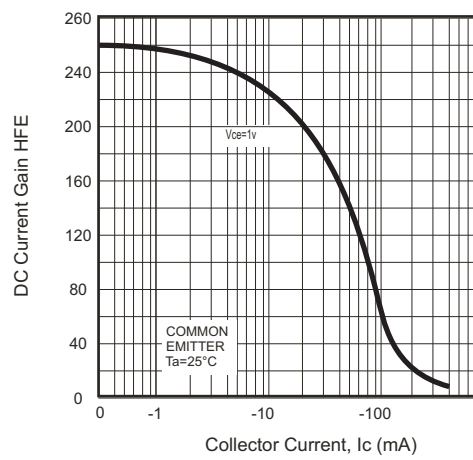
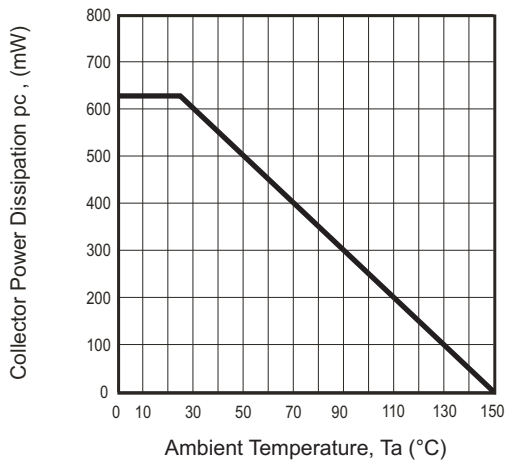


Fig.5 - P_c - T_a



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Standard Packaging

Case Type	Bag	BOX	CARTON
	(EA)	(EA)	(EA)
TO-92	1000	10000	100000