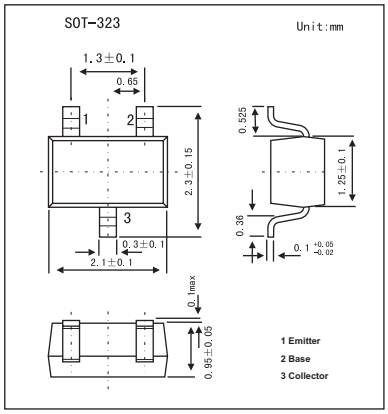
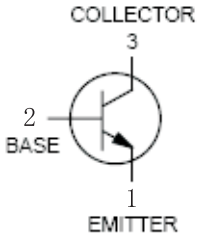
General Purpose Transistor

MMBT2907AW



Features

- General purpose transistor.
- Pb?Free package is available.



Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-emitter voltage	V_{CEO}	-60	V
Collector-base voltage	V_{CBO}	-60	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-600	mA
Total Device Dissipation FR-5 Board	P_D	150	mW
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	833	℃/W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

* FR-5 = 1.0X 0.75 X0.062 in.

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C = -10 mA, I_B = 0	-60			V
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C = -10 mA, I_E = 0	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E = -10 μA, I_C = 0	-5			V
Base cutoff current	I_{BL}	V_{CE} = -30 V, $V_{EB(off)}$ = -0.5 V			-50	nA
Collector cutoff current	I_{CEX}	V_{CE} = -30 V, $V_{EB(off)}$ = -0.5 V			-50	nA
DC current gain *	H_{FE}	I_C = -0.1 mA, V_{CE} = -10 V I_C = -1.0 mA, V_{CE} = -10 V I_C = -10 mA, V_{CE} = -10 V I_C = -150 mA, V_{CE} = -10 V I_C = -500 mA, V_{CE} = -10 V	75 100 100 100 50			
Collector-emitter saturation voltage *	$V_{CE(sat)}$	I_C = -150 mA, I_B = -15 mA			-0.4	V
		I_C = -500 mA, I_B = -50 mA			-1.6	
Base-emitter saturation voltage *	$V_{BE(sat)}$	I_C = -150 mA, I_B = -15 mA			-1.3	
		I_C = -500 mA, I_B = -50 mA			-2.6	
Current-gain-bandwidth product	f_T	I_C = -50 mA, V_{CE} = 20 V, f = 100 MHz	200			MHz
Output capacitance	C_{obo}	V_{CB} = -10 V, I_E = 0, f = 1.0 MHz			8.0	pF
Input capacitance	C_{ibo}	V_{EB} = -2.0 V, I_C = 0, f = 1.0 MHz			30	pF
Turn?on time	t_{on}	V_{CC} = -30 V, I_C = -150 mA, I_{B1} = -15 mA			45	ns
Delay time	t_d				10	ns
Rise time	t_r				40	ns
Storage time	t_s	V_{CC} = -6.0 V, I_C = -150 mA, I_{B1} = I_{B2} = 15 mA			80	ns
Fall time	t_f				30	ns
Turn?off time	t_{off}				100	ns

* Pulse test: pulse width ⩽ 300 μs, duty cycle ⩽ 2.0%.

■ Marking

Marking	20