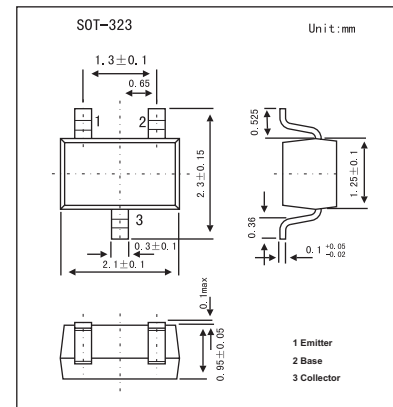
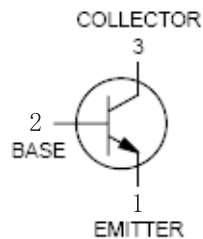


General Purpose Transistor

MMBT2907AW

■ Features

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

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

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	$^\circ\text{C}/\text{W}$
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

MMBT2907AW

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

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

* Pulse test: pulse width $\leq 300\text{ }\mu\text{s}$, duty cycle $\leq 2.0\%$.

■ Marking

Marking	20
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