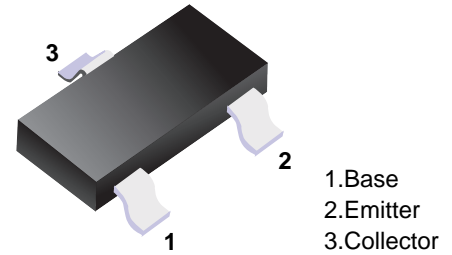


**■ NPN Transistors**
**■ Features**

- Epitaxial planar die construction.
- Complementary PNP type available(MMBT2907A)


**■ Simplified outline(SOT-23)**
**■ Marking**

Marking	1P
---------	----

**■ Absolute Maximum Ratings Ta = 25°C**

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	70	V
Collector - Emitter Voltage	$V_{CE0}$	40	
Emitter - Base Voltage	$V_{EB0}$	6	
Collector Current - Continuous	$I_C$	600	mA
Power Dissipation	$P_D$	250	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	417	°C/W
Junction Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{stg}$	-55 to 150	

**■ Electrical Characteristics Ta = 25°C**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100 \mu A, I_E = 0$	75			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10 mA, I_B = 0$	40			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 100 \mu A, I_C = 0$	6			V
Collector cutoff current	$I_{CBO}$	$V_{CB}=60V, I_E=0$			100	nA
Collector cut-off current	$I_{CEX}$	$V_{CE}=30V, V_{EB(off)}=-3V$			10	nA
Emitter cutoff current	$I_{EBO}$	$V_{EB}= 3V, I_C=0$			100	nA
DC current gain	$h_{FE}$	$V_{CE}=10V, I_C= 0.1mA$	40			
		$V_{CE}=10V, I_C= 150mA$	100		300	
		$V_{CE}=10V, I_C= 500mA$	42			
collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 150 mA; I_B = 15 mA$			0.3	V
		$I_C = 500 mA; I_B = 50 mA$			1	V
base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C = 150 mA; I_B = 15 mA$	0.6		1.2	V
		$I_C = 500 mA; I_B = 50 mA$			2	V
Transition frequency	$f_T$	$I_C = 20 mA; V_{CE} = 20 V; f = 100 MHz$	300			MHz
Delay time	$t_d$	$V_{CC}=30V, V_{BE(off)}=-0.5V,$			10	ns
Rise time	$t_r$	$I_C=150mA, I_{B1}= 15mA$			25	ns
Storage time	$t_s$	$V_{CC}=30V, I_C=150mA, I_{B1}=-I_{B2}=15mA$			225	ns
Fall time	$t_f$				60	ns

\* pulse test: Pulse Width  $\leq 300\mu s$ , Duty Cycle  $\leq 2.0\%$ .

■ Typical Characteristics

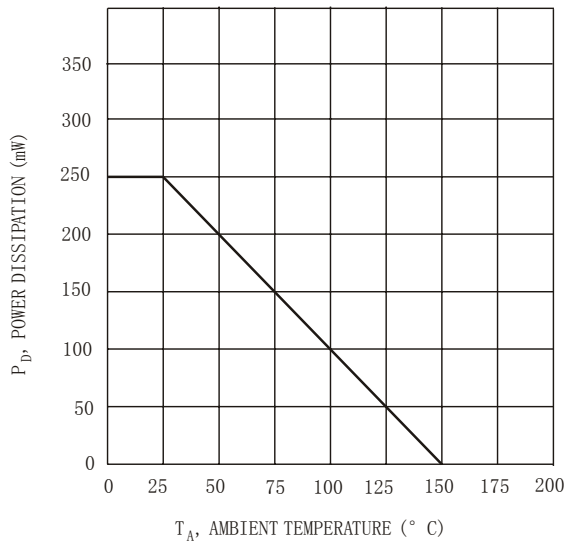


Fig. 1, Max Power Dissipation vs Ambient Temperature

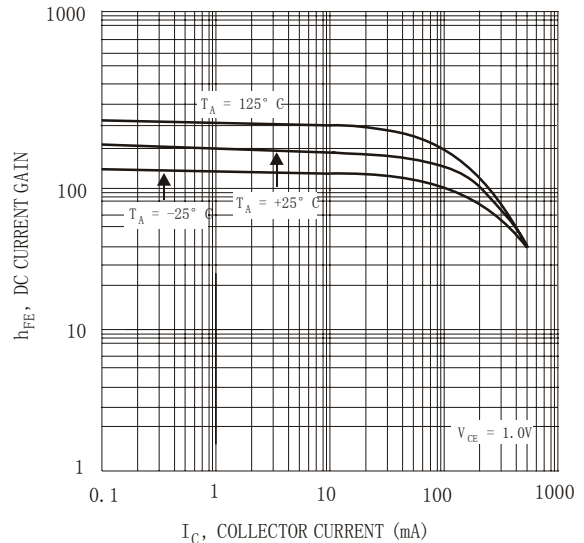


Fig. 2, Typical DC Current Gain vs Collector Current

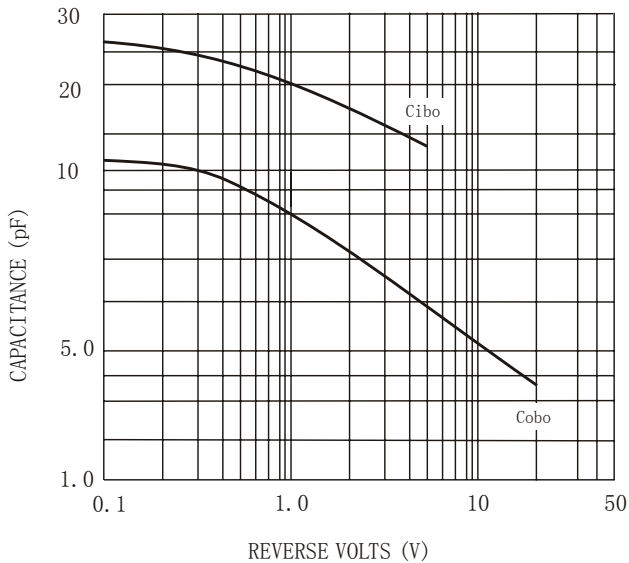


Fig. 3 Typical Capacitance

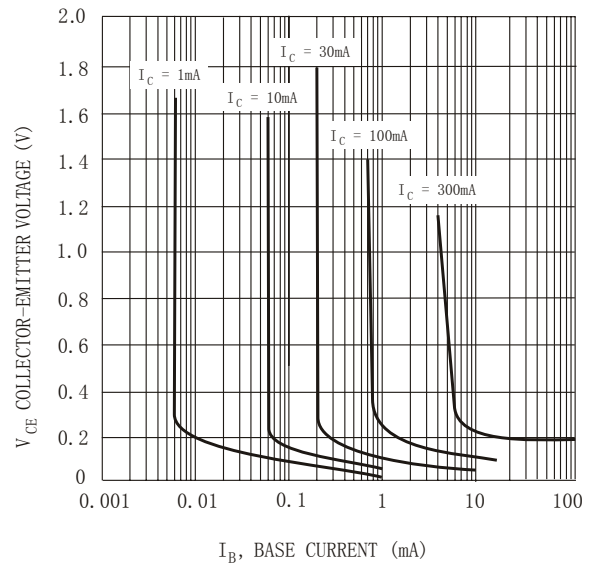
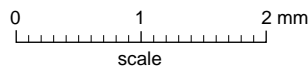
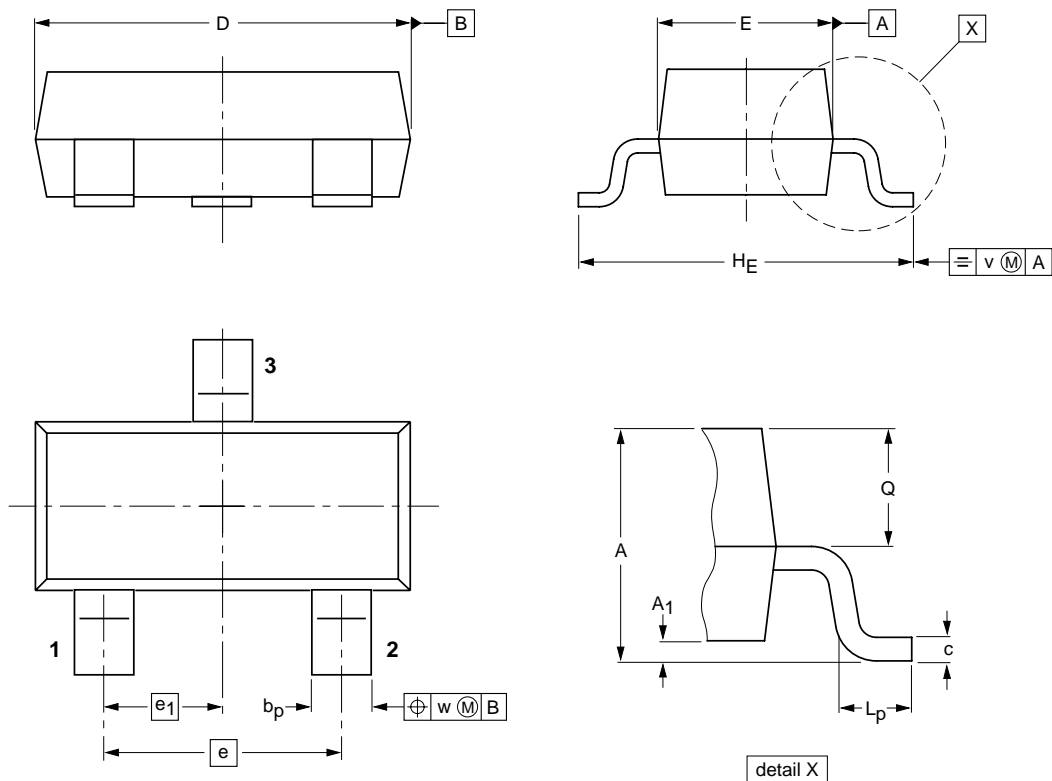


Fig. 4 Typical Collector Saturation Voltage

**Package Outline**

**SOT-23**



**DIMENSIONS (mm are the original dimensions)**

UNIT	A	A <sub>1</sub> max.	b <sub>p</sub>	c	D	E	e	e <sub>1</sub>	H <sub>E</sub>	L <sub>p</sub>	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

**Summary of Packing Options**

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel, 7" reel	3000	EIA-481-1

单击下面可查看定价，库存，交付和生命周期等信息

[>>YFW\(佑风微\)](#)