

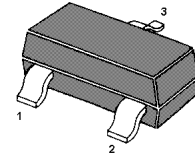
MMBT2907A PNP Silicon Epitaxial Planar Transistor

Features

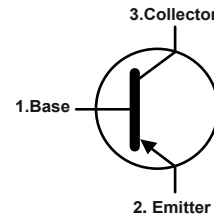
- Complementary to MMBT2222A
- High Stability and High Reliability

Mechanical Data

- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any



1.Base 2.Emitter 3.Collector
SOT-23 Plastic Package



Equivalent Circuit

Marking: 2F

Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

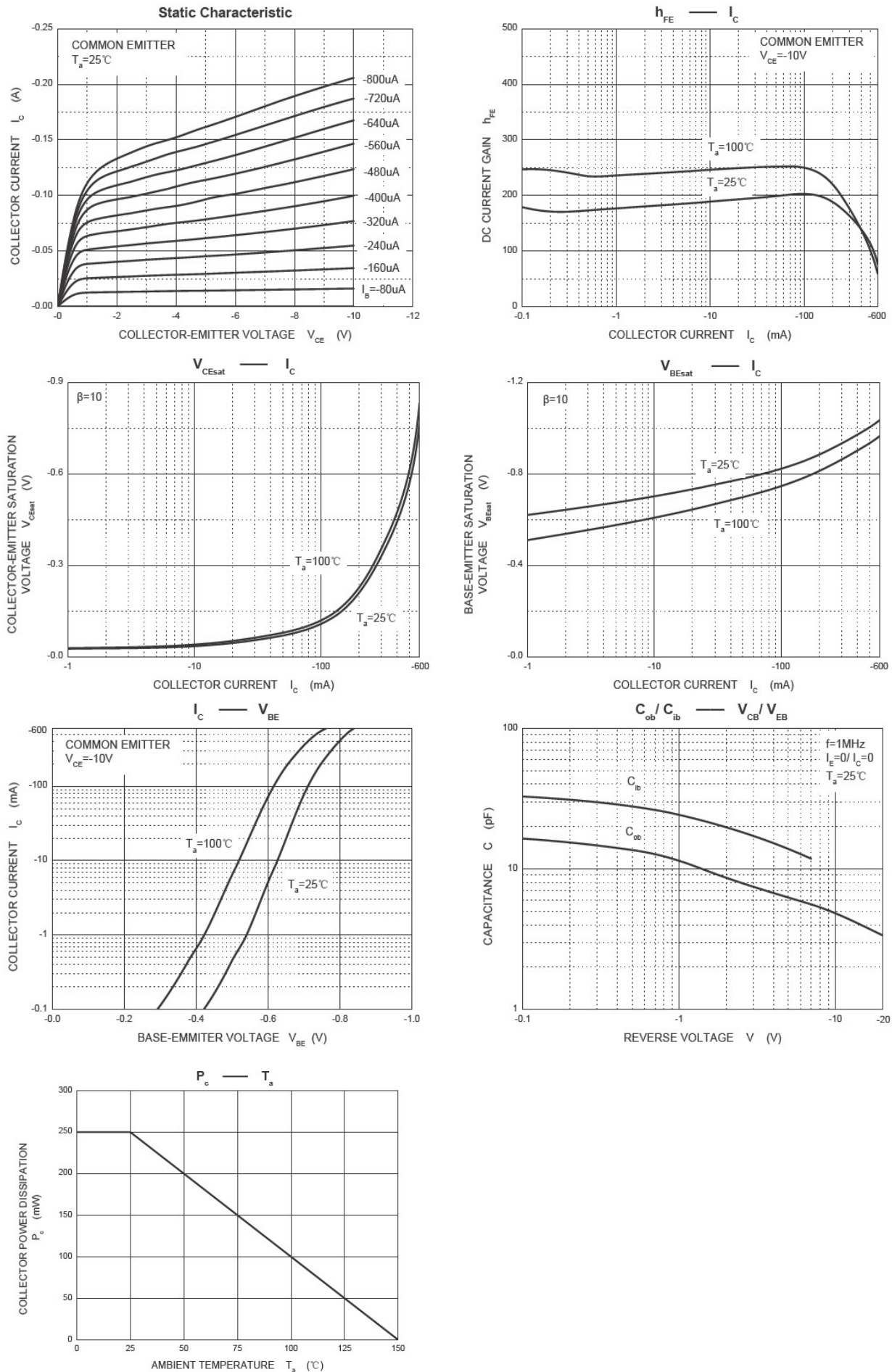
Parameters	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-60	V
Emitter -Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-600	mA
Collector Power Dissipation	P_C	250	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55-+150	°C
Thermal resistance From junction to ambient	$R_{\theta JA}$	500	°C/W

Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C = -1mA, I_B = 0$	-60		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5		V
Collector cut-off current	I_{CBO}	$V_{CB} = -50V, I_E = 0$		-20	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -3V, I_C = 0$		-10	nA
Collector cut-off current	I_{CEX}	$V_{CE} = -30V, V_{BE(off)} = -0.5V$		-50	nA
DC current gain	$h_{FE(1)}^*$	$V_{CE} = -10V, I_C = -150mA$	100	300	
	$h_{FE(2)}^*$	$V_{CE} = -10V, I_C = -0.1mA$	75		
	$h_{FE(3)}^*$	$V_{CE} = -10V, I_C = -1mA$	100		
	$h_{FE(4)}^*$	$V_{CE} = -10V, I_C = -10mA$	100		
	$h_{FE(5)}^*$	$V_{CE} = -10V, I_C = -500mA$	50		
Collector-emitter saturation voltage	$V_{CE(sat)1}^*$	$I_C = -150mA, I_B = -15mA$		-0.4	V
	$V_{CE(sat)2}^*$	$I_C = -500mA, I_B = -50mA$		-1.6	V
Base -emitter saturation voltage	$V_{BE(sat)1}^*$	$I_C = -150mA, I_B = -15mA$		-1.30	V
	$V_{BE(sat)2}^*$	$I_C = -500mA, I_B = -50mA$		-2.60	V
Transition frequency	f_T	$V_{CE} = -20V, I_C = -50mA, f = 100MHz$	200		MHz
Delay time	t_d	$V_{CE} = -30V, I_C = -150mA, I_{B1} = -15mA$		10	nS
Rise time	t_r			25	nS
Storage time	t_s			225	nS
Fall time	t_f	$V_{CE} = -6V, I_C = -150mA, I_{B1} = I_{B2} = -15mA$		60	nS

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

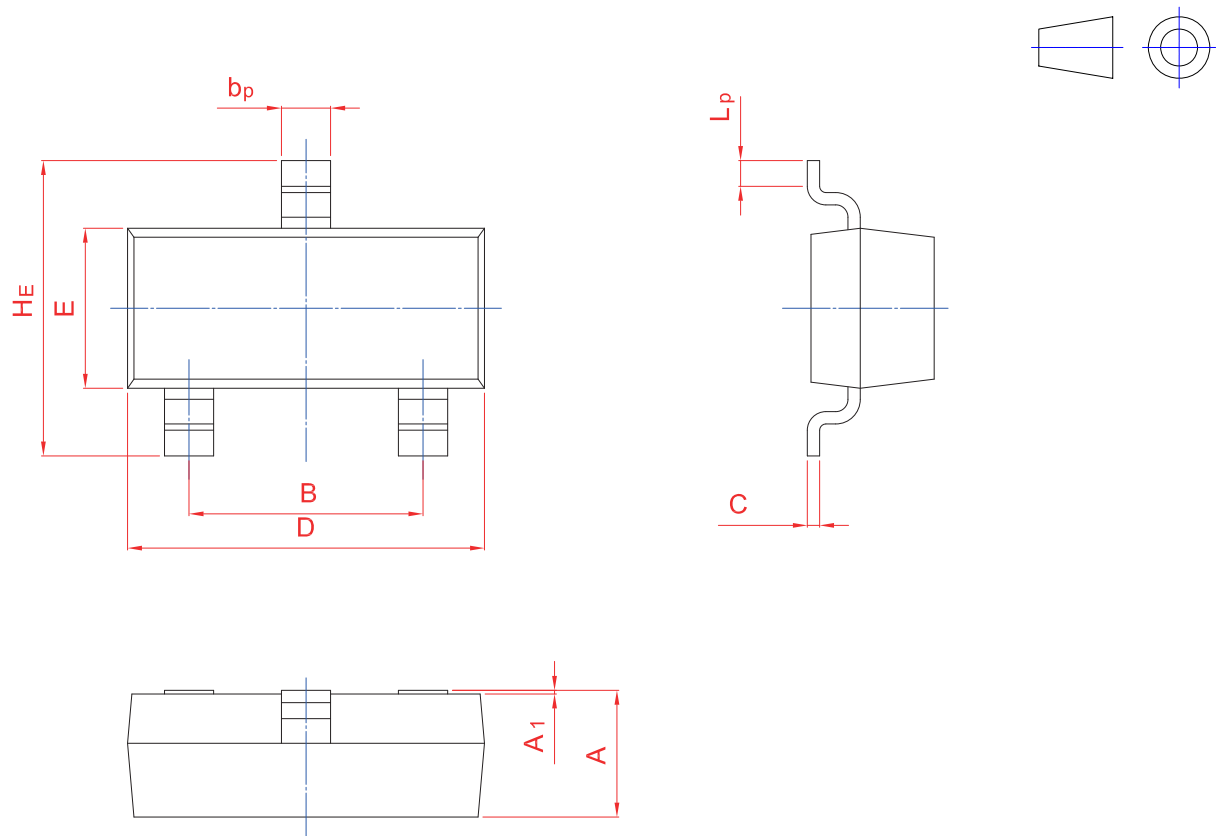
Typical characteristics



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	b _p	C	D	E	HE	A ₁	L _p
mm	1.40 0.89	2.04 1.78	0.51 0.30	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20