

MMBT2907AT TRANSISTOR (PNP)

FEATURES

Power dissipation

P_{CM} : 0.15 W ($T_{amb}=25^{\circ}C$)

Collector current

I_{CM} : -0.6 A

Collector-base voltage

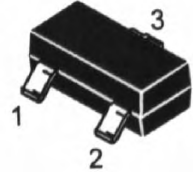
$V_{(BR)CBO}$: -60 V

Operating and storage junction temperature range

T_J, T_{stg} : $-55^{\circ}C$ to $+150^{\circ}C$

SOT-523

1. BASE
2. EMITTER
3. COLLECTOR



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu A, I_E=0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10mA, I_B=0$	-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}	$V_{CB}=-50V, I_E=0$			-10	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=-4V, I_C=0$			-10	nA
DC current gain	$h_{FE(1)}$	$V_{CE}=-10V, I_C=-100\mu A$	75			
	$h_{FE(2)}$	$V_{CE}=-10V, I_C=-1mA$	100			
	$h_{FE(3)}$	$V_{CE}=-10V, I_C=-10mA$	100			
	$h_{FE(4)}$	$V_{CE}=-10V, I_C=-150mA$	100		300	
	$h_{FE(5)}$	$V_{CE}=-10V, I_C=-500mA$	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	$V_{BE(sat)(1)}$	$I_C=-150mA, I_B=-15mA$			-1.3	V
	$V_{BE(sat)(2)}$	$I_C=-500mA, I_B=-50mA$			-2.6	V
Transition frequency	f_T	$V_{CE}=-12V, I_C=-2mA, f=30MHz$		140		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-12V, I_E=0, f=1MHz$			5	pF
Turn-on Time	t_{on}	$V_{CC}=-30V, I_C=-150mA, I_{B1}=-15mA$			45	ns
Delay Time	t_d				10	ns
Rise Time	t_r				40	ns
Turn-off Time	t_{off}				100	ns
Storage Time	t_s	$V_{CC}=-6V, I_C=-150mA, I_{B1}=I_{B2}=-15mA$			80	ns
Fall Time	t_f				30	ns

Marking	2F
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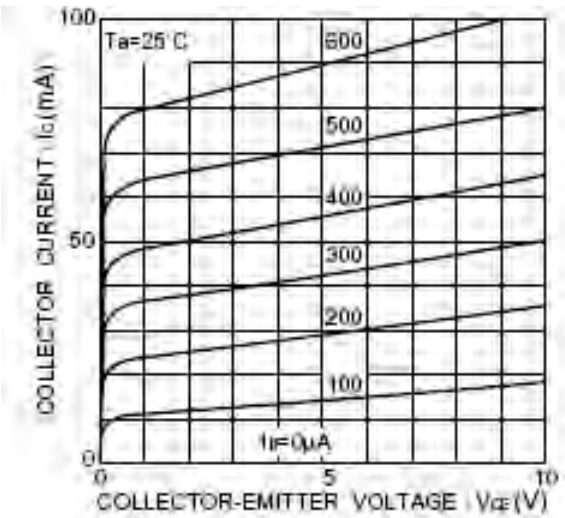


Fig.1 Grounded emitter output characteristics

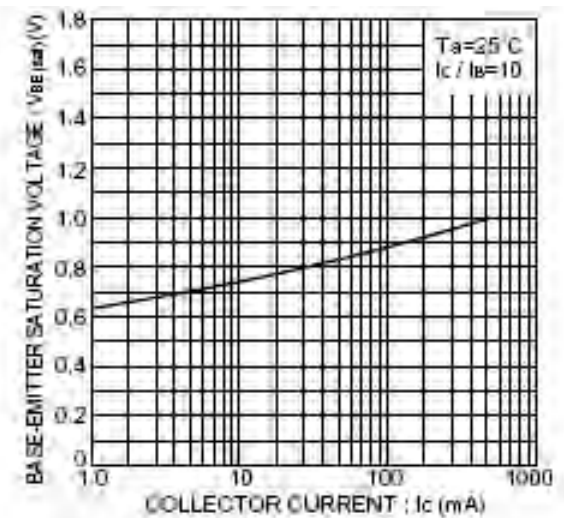


Fig.2 Base-emitter saturation voltage vs. collector current

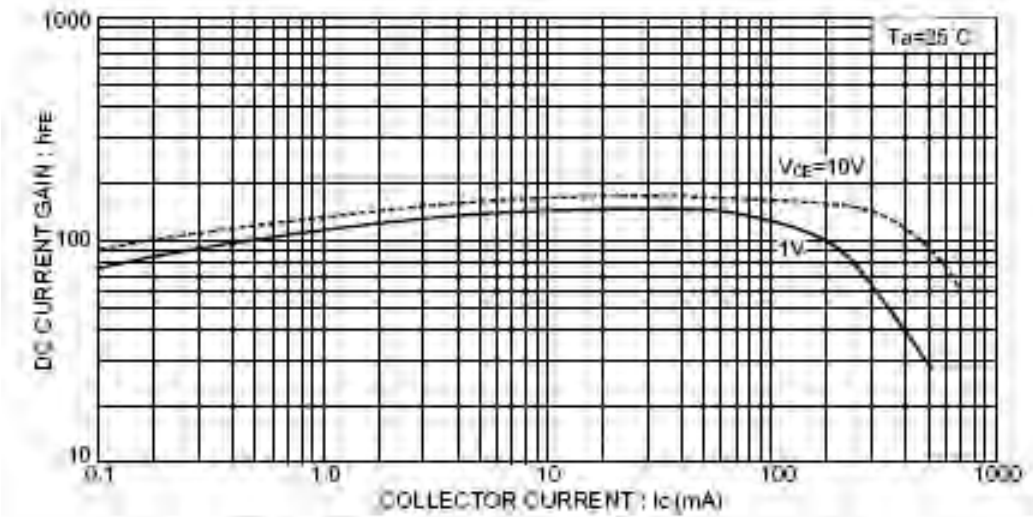


Fig.3 DC current gain vs. collector current (I)

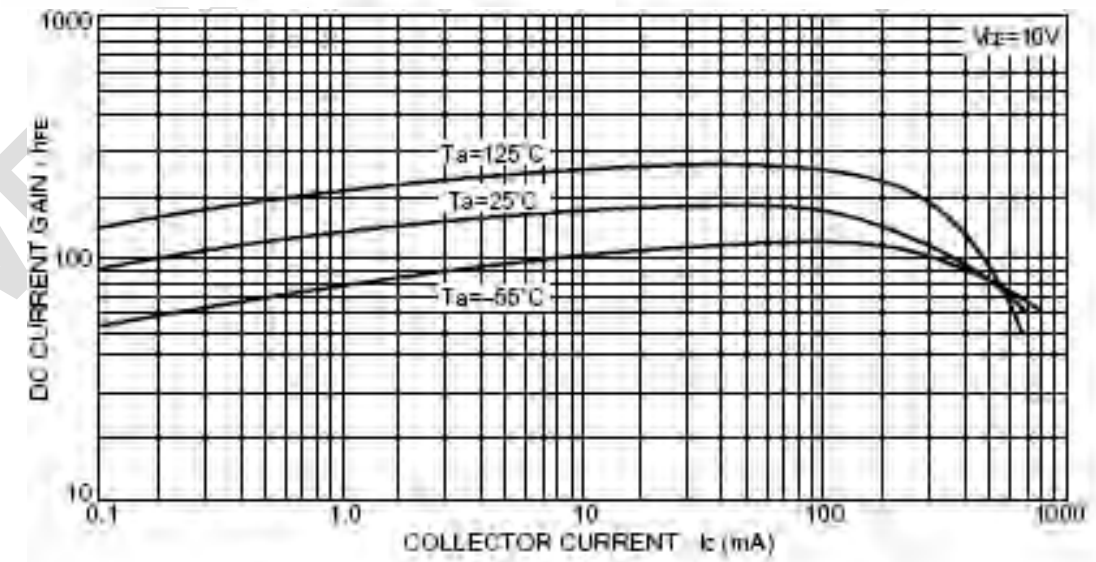


Fig.4 DC current gain vs. collector current (II)