Elektronische Bauelemente

MMBT2907AW

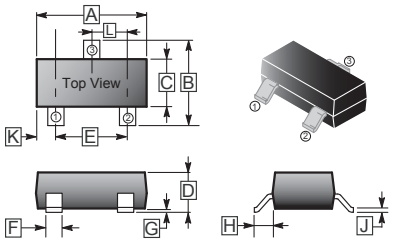
PNP Silicon
General Purpose Transistor

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

SOT-323

FEATURE

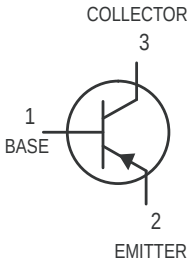
- Complementary NPN Type Available(MMBT2222AW)
- Epitaxial Planar Die Construction
- Ideal for Medium Power Amplification and Switching



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.80	2.20	G	0.100 REF.	
B	1.80	2.45	H	0.525 REF.	
C	1.15	1.35	J	0.08	0.25
D	0.80	1.10	K	-	-
E	1.20	1.40	L	0.650 TYP.	
F	0.20	0.40			

MARKING CODE

MMBT2907AW = K3F, 20



ABSOLUTE MAXIMUM RATINGS at Ta = 25°C

PARAMETER	SYMBOL	RATINGS	UNIT
Collector to Base Voltage	V_{CBO}	-60	V
Collector to Emitter Voltage	V_{CEO}	-60	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collector Currrent	I_C	-600	mA
Total Power Dissipation	P_D	200	mW
Junction, Storage Temperature	T_J, T_{STG}	+150, -55 ~ +150	℃

ELECTRICAL CHARACTERISTICS at Ta = 25°C

CHARACTERISTIC	TEST CONDITION	SYMBOL	MIN.	MAX.	UNIT
Collector-Base Breakdown Voltage	I_C=-10μA, I_E=0	BV_{CBO}	-60		V
Collector-Emitter Breakdown Voltage	I_C = -10 mA, I_B = 0	BV_{CEO}	-60		V
Emitter=Base Breakdown Voltage	I_E=-10μA, I_C=0	BV_{EBO}	-5		V
Collector Cutoff Current	V_{CB}=-50V, I_E=0	I_{CBO}		-100	nA
Collector Cutoff Current	V_{EB}=-30V, I_B=0	I_{CES}		-100	nA
Emitter Cutoff Current	V_{EB}=-3V, I_C=0	I_{EBO}		-100	nA
DC Current Gain	V_{CE}=-10V, I_C=-0.1mA	h_{FE1}	75		
	V_{CE}=-10V, I_C=-1mA	h_{FE2}	100		
	V_{CE}=-10V, I_C=-10mA	h_{FE3}	100		
	V_{CE}=-10V, I_C=-150mA	h_{FE4}	100	300	
	V_{CE}=-10V, I_C=-500mA	h_{FE5}	50		
Collector-emitter Saturation Voltage	I_C=-150mA, I_B=-15mA	$V_{CE(sat)}$		-0.4	V
	I_C=-500mA, I_B=-50mA	$V_{CE(sat)}$		-1.6	V
Base-Emitter Saturation Voltage	I_C=-150mA, I_B=-15mA	$V_{BE(sat)}$	-0.6	-1.3	V
	I_C=-500mA, I_B=-50mA	$V_{BE(sat)}$		-2.6	V
Transition Frequency	V_{CE}=-20V, I_C=-50mA, f=100MHz	f_T	200		MHz
Output Capacitance	V_{CB}=-10V, I_E=0, f=0.1MHz	C_{obo}		8	pF
Input Capacitance	V_{EB}=-2V, I_C=0, f=0.1MHz	Cib		30	pF
Delay Time	V_{cc}=-30V, $V_{BE(Off)}$=-1.5V	T_d		10	nS
Rise Time	I_C=-150mA, I_{B1}=-15mA	T_r		40	nS
Storage Time	V_{cc}=-30V, I_C=-150mA	T_S		80	nS
Fall Time	I_{B1}=- I_{B2} =-15mA	T_F		30	nS

CHARACTERISTIC CURVES

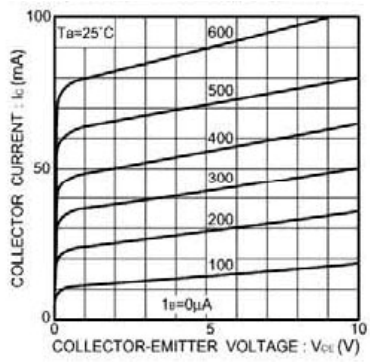


Fig.1 Grounded emitter output characteristics

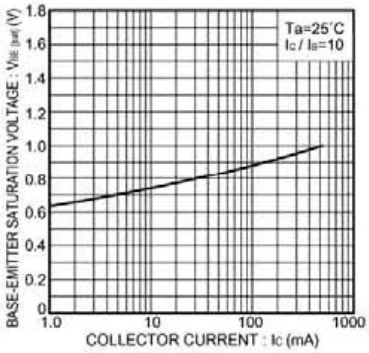


Fig.2 Base-emitter saturation voltage vs. collector current

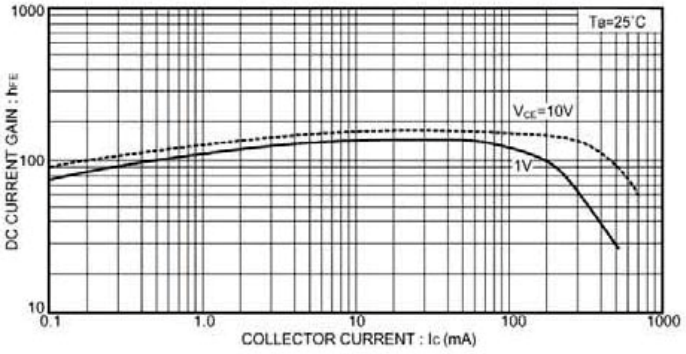


Fig.3 DC current gain vs. collector current (I)

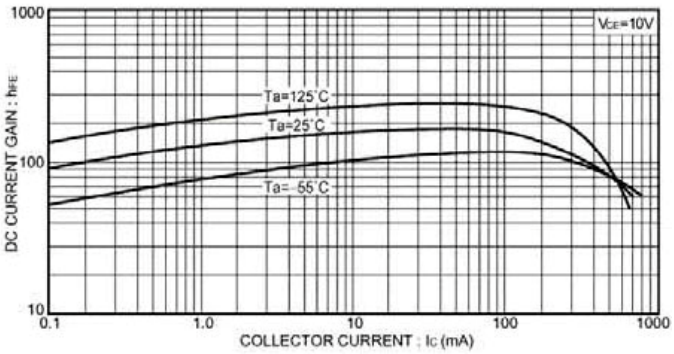


Fig.4 DC current gain vs. collector current (II)

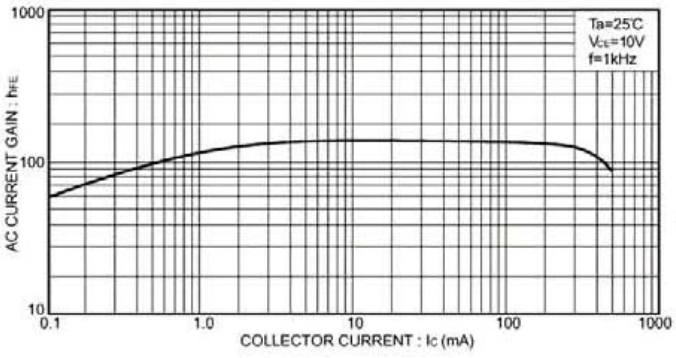


Fig.5 AC current gain vs. collector current

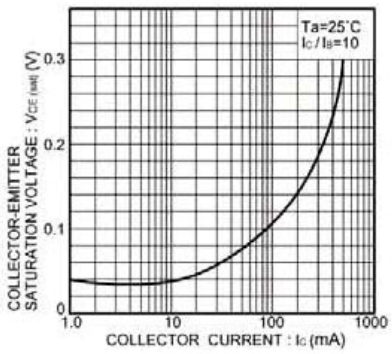


Fig.6 Collector-emitter saturation voltage vs. collector current

CHARACTERISTIC CURVES

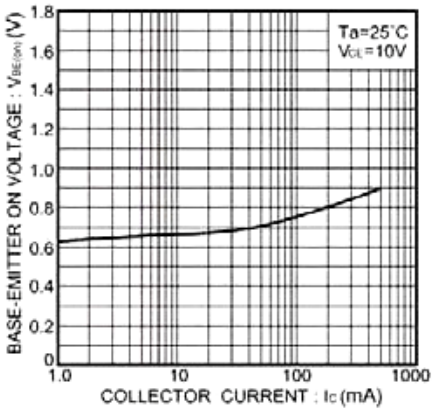


Fig.7 Grounded emitter propagation characteristics

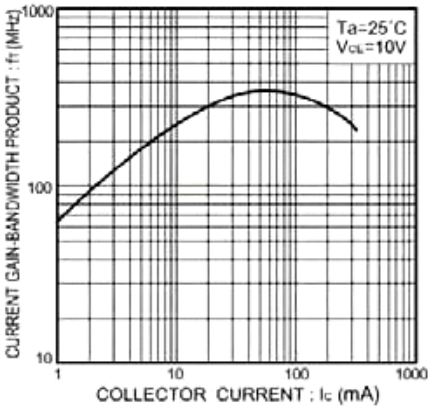


Fig.8 Gain bandwidth product vs. collector current

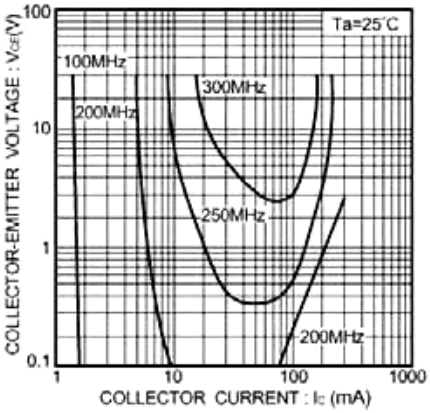


Fig.9 Gain bandwidth product

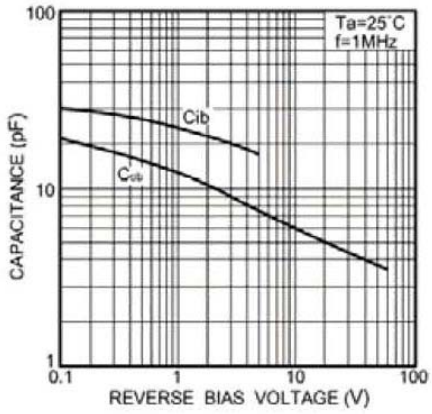


Fig.10 Input/output capacitance vs. voltage

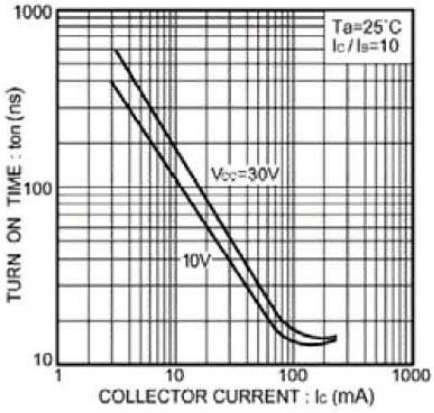


Fig.11 Turn-on time vs.collector current

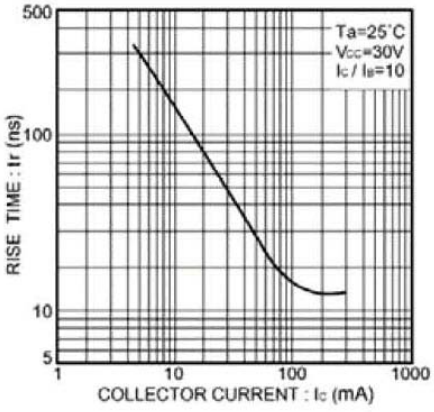


Fig.12 Rise time vs. collector current

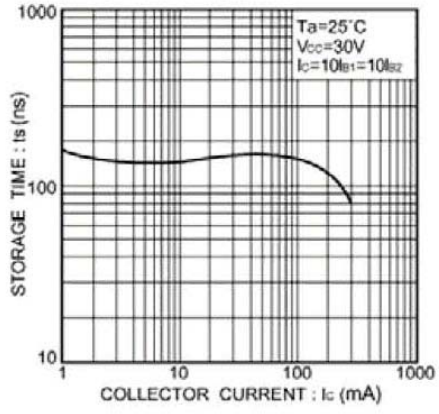


Fig.13 Storage time vs. collector current

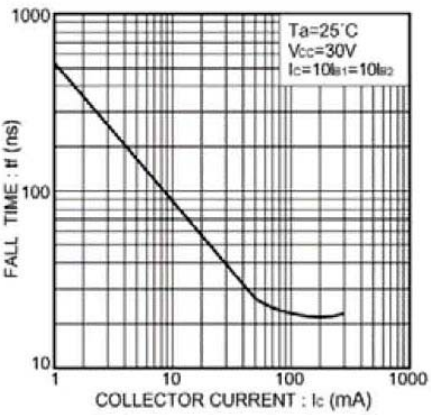


Fig.14 Fall time vs. collector current