

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

FEATURE

- Complementary PNP Type Available(MMBT2907AW)
- Epitaxial Planar Die Construction
- Ideal for Medium Power Amplification and Switching

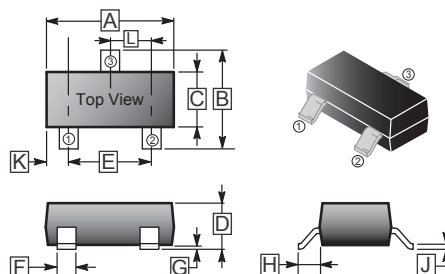
MARKING CODE

K3P / P1

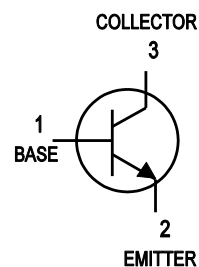
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-323	3K	7 inch

SOT-323



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			



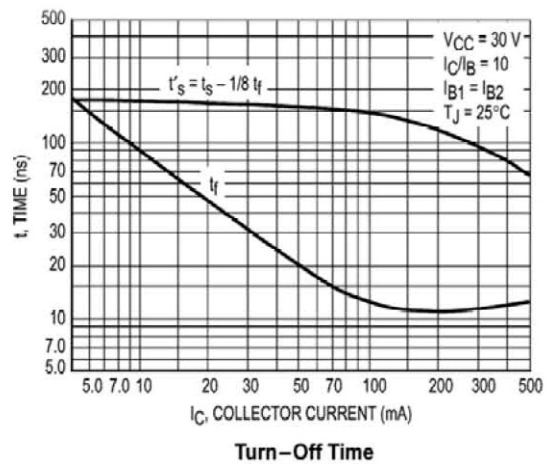
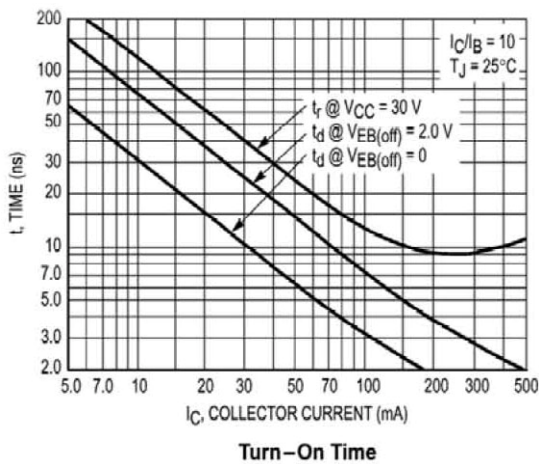
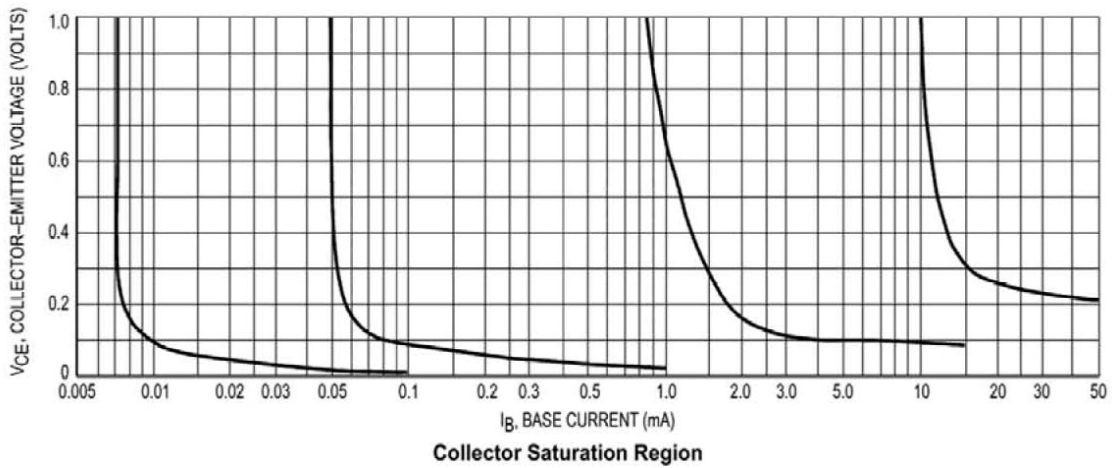
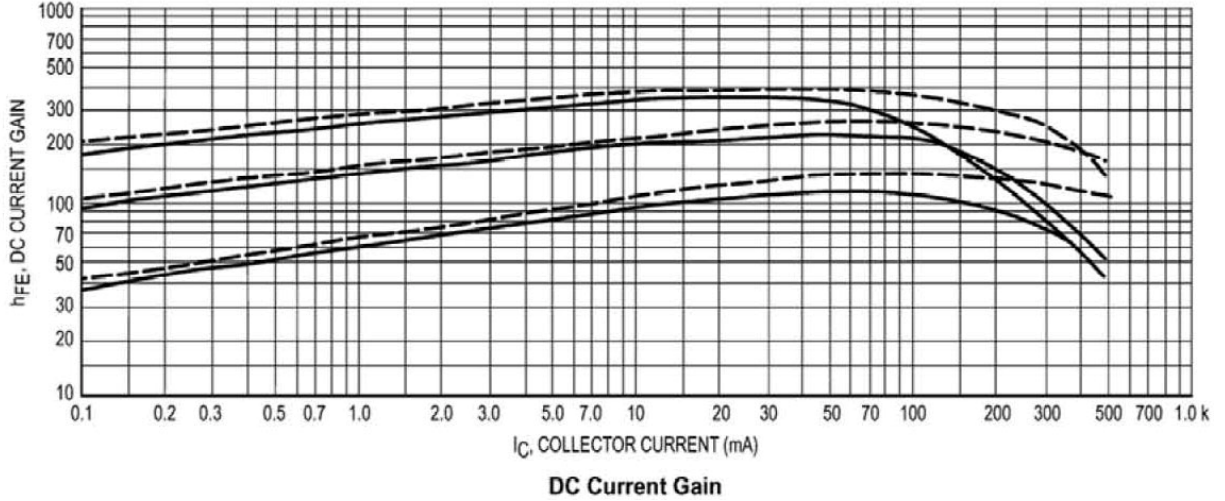
ABSOLUTE MAXIMUM RATINGS at Ta = 25°C

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	75	V
Collector to Emitter Voltage	V_{CEO}	40	V
Emitter to Base Voltage	V_{EBO}	6	V
Collector Current	I_C	600	mA
Total Power Dissipation	P_C	200	mW
Junction, Storage Temperature	T_J, T_{STG}	+150, -55 ~ +150	°C

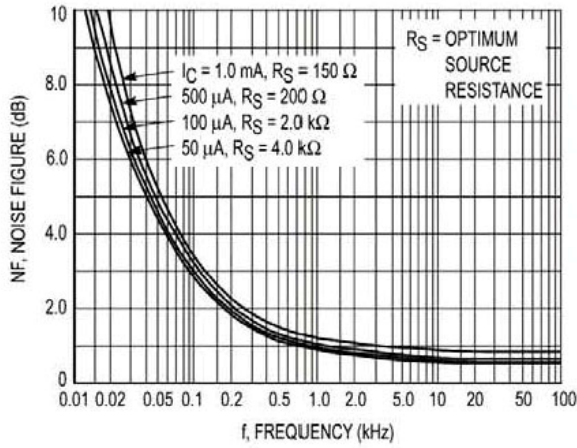
ELECTRICAL CHARACTERISTICS at Ta = 25°C

CHARACTERISTIC	TEST CONDITION	SYMBOL	MIN.	MAX.	UNIT
Collector-Base Breakdown Voltage	$I_C=10\mu A, I_E=0$	$V_{(BR)CBO}$	75		V
Collector-Emitter Breakdown Voltage	$I_C=10\text{ mA}, I_B=0$	$V_{(BR)CEO}$	40		V
Emitter-Base Breakdown Voltage	$I_E=10\mu A, I_C=0$	$V_{(BR)EBO}$	6		V
Collector Cutoff Current	$V_{CB}=70V, I_E=0$	I_{CBO}		100	nA
Collector Cutoff Current	$V_{EB}=35V, I_C=0$	I_{CEO}		100	nA
Emitter Cutoff Current	$V_{EB}=3V, I_C=0$	I_{EBO}		100	nA
DC Current Gain	$V_{CE}=10V, I_C=-0.1\text{mA}$	h_{FE1}	35		
	$V_{CE}=10V, I_C=1\text{mA}$	h_{FE2}	50		
	$V_{CE}=10V, I_C=10\text{mA}$	h_{FE3}	75		
	$V_{CE}=10V, I_C=150\text{mA}$	h_{FE4}	100	300	
	$V_{CE}=10V, I_C=500\text{mA}$	h_{FE5}	40		
Collector-emitter Saturation Voltage	$I_C=500\text{mA}, I_B=50\text{mA}$	$V_{CE(sat)}$		1	V
	$I_C=150\text{mA}, I_B=15\text{mA}$	$V_{CE(sat)}$		0.3	V
Base-Emitter Saturation Voltage	$I_C=500\text{mA}, I_B=50\text{mA}$	$V_{BE(sat)}$		2.0	V
	$I_C=150\text{mA}, I_B=15\text{mA}$	$V_{BE(sat)}$		1.2	V
Transition Frequency	$V_{CE}=20V, I_C=20\text{mA}, f=1\text{MHz}$	f_T	300		MHz
Output Capacitance	$V_{CB}=10V, I_E=0, f=1\text{MHz}$	C_{ob}		8	pF
Delay Time	$V_{CC}=30V, V_{BE(Off)}=-0.5V$ $I_C=150\text{mA}, I_{B1}=15\text{mA}$	T_d		10	nS
Rise Time		T_r		25	nS
Storage Time	$V_{CC}=30V, I_C=150\text{mA}$ $I_{B1}=-I_{B2}=15\text{mA}$	T_s		225	nS
Fall Time		T_f		60	nS

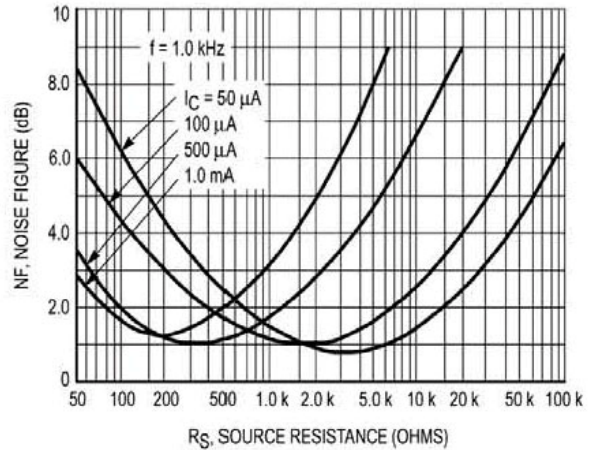
CHARACTERISTIC CURVES



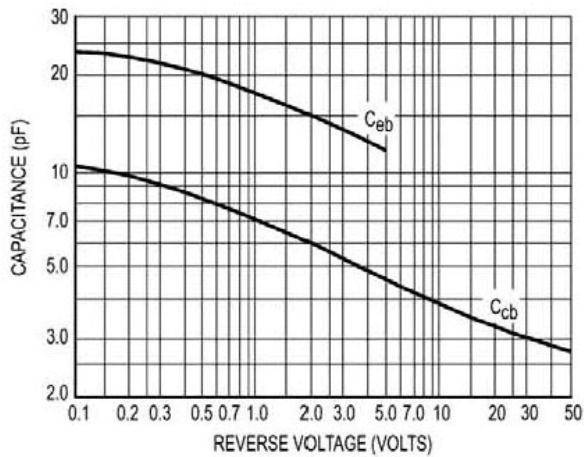
CHARACTERISTIC CURVES



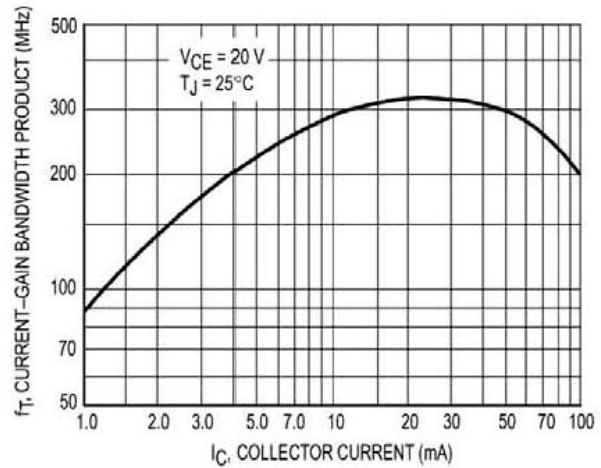
Frequency Effects



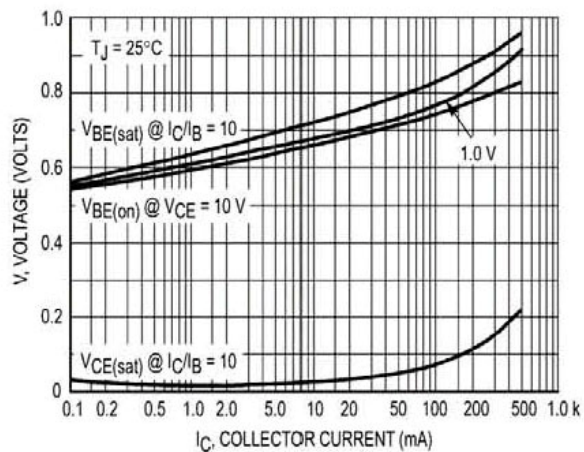
Source Resistance Effects



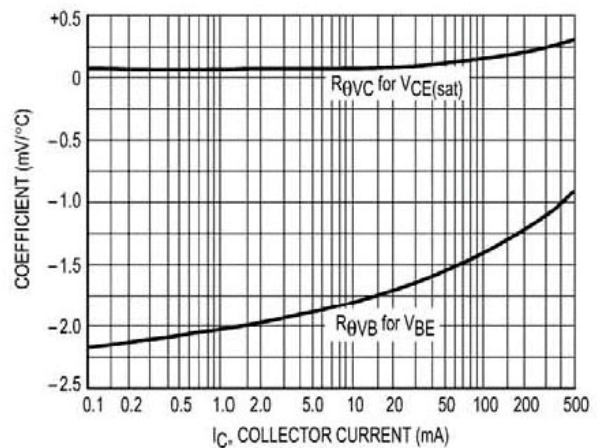
Capacitances



Current-Gain Bandwidth Product



"On" Voltages



Temperature Coefficients