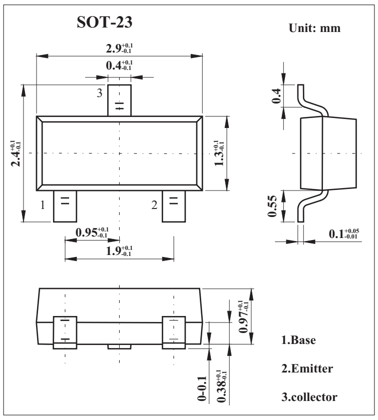
PNP General Purpose Amplifier

KMBT2907



■ Features

- Collector Current to Continuous : I_C=-600mA
- Power Dissipation : P_D=250mW

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current - Continuous	I_C	-600	mA
Total Device Dissipation	P_D	250	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	500	℃/ W
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-55 to +150	℃

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Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = -10 μA, I_E = 0	-60		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 = -10 μA, I_C = 0	-5		V
Base Cutoff Current	I_B	V_{EB} = -0.5 V		-50	nA
Collector Cutoff Current	I_{CEX}	V_{CE} = -30 V		-50	nA
Collector Cutoff Current	I_{CBO}	V_{CB} = -50 V, I_E = 0		-20	nA
		V_{CB} = -50 V, I_E = 0, T_A = 150℃		-20	μA
DC Current Gain	h_{FE}	I_C = -0.1 mA, V_{CE} = -10 V	35		
		I_C = -1.0 mA, V_{CE} = -10 V	50		
		I_C = -10 mA, V_{CE} = -10 V	75		
		I_C = -150 mA, V_{CE} = -10 V	100	300	
		I_C = -500 mA, V_{CE} = -10 V	30		
Collector-Emitter Saturation Voltage*	$V_{CE(sat)}$	I_C = -150 mA, I_B = -15 mA		-0.4	V
		I_C = -500 mA, I_B = -50 mA		-1.6	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = -150 mA, I_B = -15 mA		-1.3	V
		I_C = -500 mA, I_B = -50 mA		-2.6	V
Current Gain - Bandwidth Product	f_T	I_C = -50 mA, V_{CE} = -20 V,f = 100 MHz	200		MHz
Output Capacitance	C_{obo}	V_{CB} = -10 V, I_E = 0,f = 100 kHz		8.0	pF
Input Capacitance	C_{ibo}	V_{EB} = -2.0 V, I_C = 0,f = 100 kHz		30	pF
Turn-on Time	t_{on}	V_{CC} = -30 V, I_C = -150 mA,I_{B1} = -15 mA		45	ns
Delay Time	t_d			10	ns
Rise Time	t_r			40	ns
Turn-off Time	t_{off}	V_{CC} = -6.0 V, I_C = -150 mA,I_{B1} = I_{B2} = -15 mA		100	ns
Storage Time	t_s			80	ns
Fall Time	t_f			30	ns

Marking

Marking	W2F

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Typical Electrical Characteristics

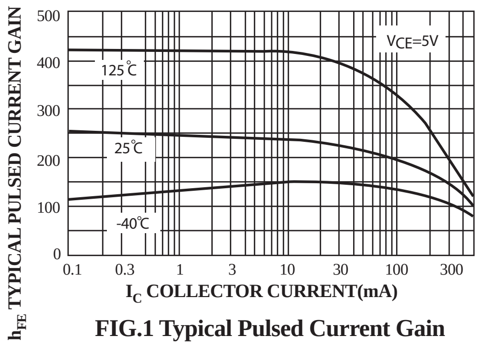

FIG.1 Typical Pulsed Current Gain vs Collector Current

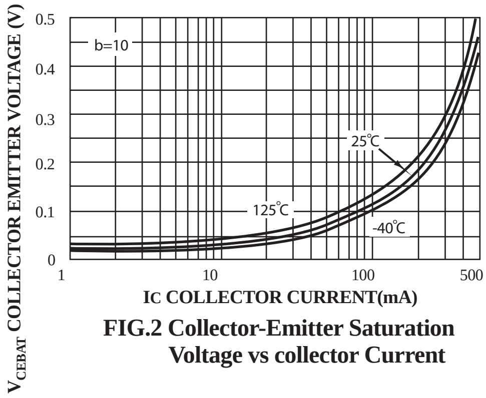

FIG.2 Collector-Emitter Saturation Voltage vs collector Current

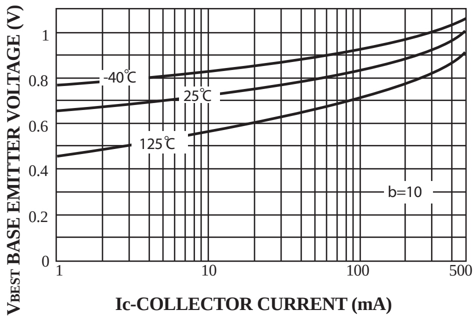

FIG.3 Base-Emitter Saturation Voltage vs Collector Current

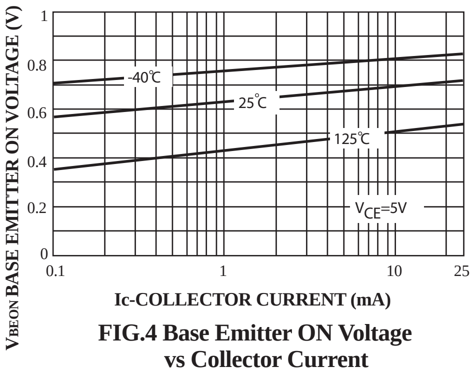

FIG.4 Base Emitter ON Voltage vs Collector Current

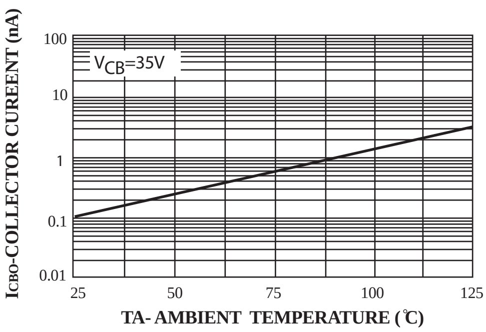

FIG.5 Collector-Cutoff Current vs. Ambient Temperature

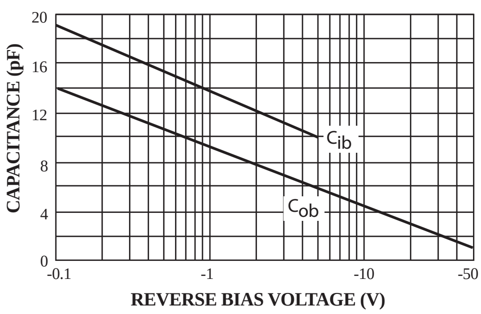

FIG.6 Input and Output Capacitance vs Reverse Bias Voltage