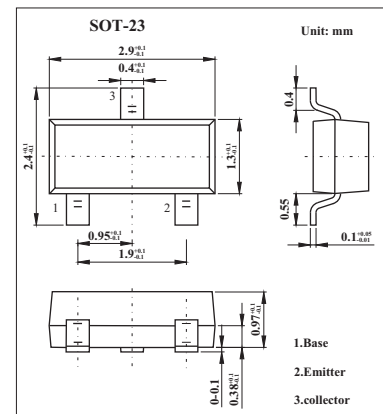


PNP General Purpose Amplifier

KMBT2907

■ Features

- Collector Current to Continuous : $I_C = -600\text{mA}$
- Power Dissipation : $P_D = 250\text{mW}$



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	-60	V
Collector-Emitter Voltage	V_{CE0}	-40	V
Emitter-Base Voltage	V_{EB0}	-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	$^\circ\text{C}/\text{W}$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$

SMD Type

Transistors

KMBT2907

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

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

■ Marking

Marking	W2F
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KMBT2907

Typical Electrical Characteristics

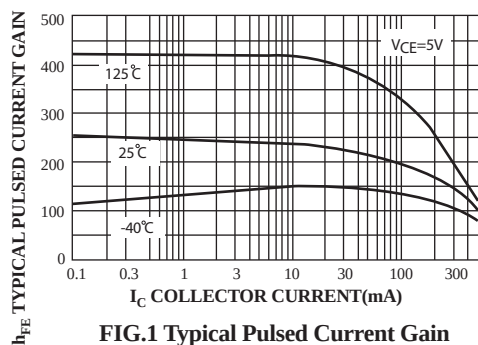


FIG.1 Typical Pulsed Current Gain vs Collector Current

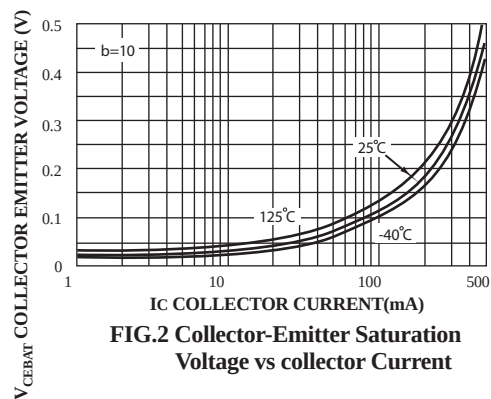


FIG.2 Collector-Emitter Saturation Voltage vs collector Current

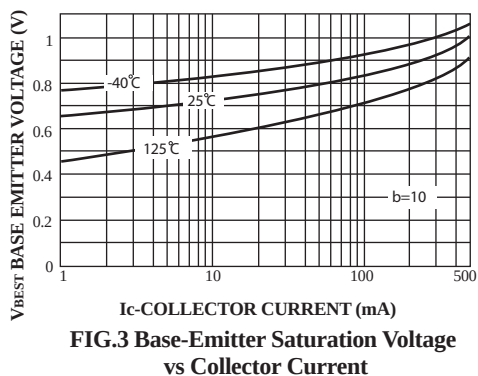


FIG.3 Base-Emitter Saturation Voltage vs Collector Current

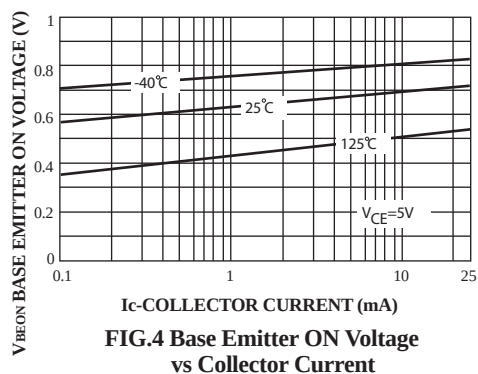


FIG.4 Base Emitter ON Voltage vs Collector Current

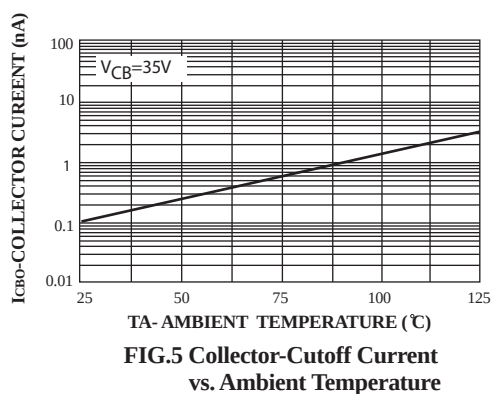


FIG.5 Collector-Cutoff Current vs. Ambient Temperature

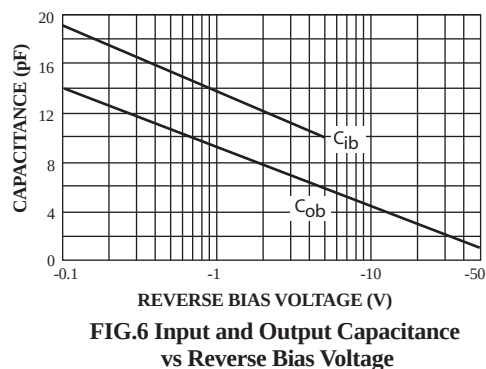


FIG.6 Input and Output Capacitance vs Reverse Bias Voltage