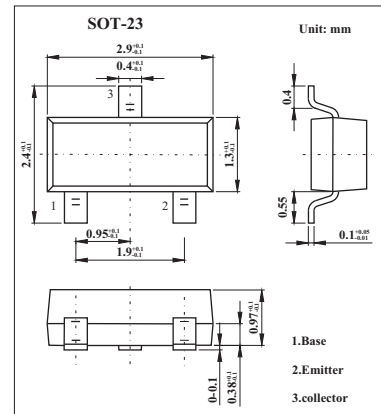


■ Features

- Collector Current to Continuous :Ic=-600mA
- Power Dissipation :Pd=250mW



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	-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 _{θJA}	500	°C/ W
Operating and Storage Junction Temperature Range	T _J , T _{stg}	-55 to +150	°C

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10 \mu A, I_E = 0$	-60		V
Collector-Emitter Breakdown Voltage*	$V_{(BR)CEO}$	$I_C = -10 mA, I_B = 0$	-40		V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10 \mu A, I_C = 0$	-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
		$V_{CB} = -50 V, I_E = 0, T_A = 150^\circ C$		-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

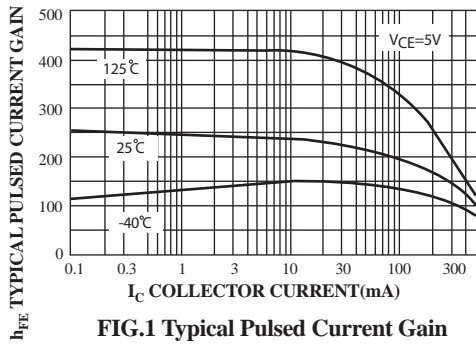


FIG.1 Typical Pulsed Current Gain vs Collector Current

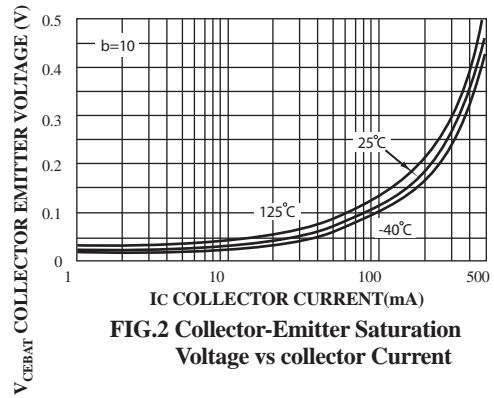


FIG.2 Collector-Emitter Saturation Voltage vs collector Current

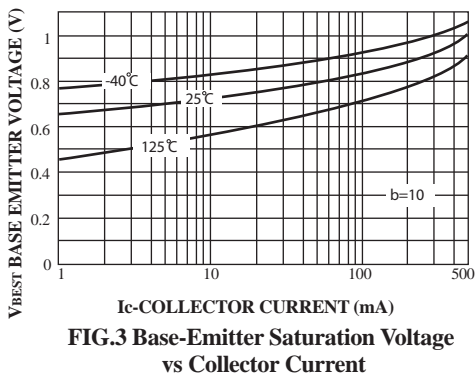


FIG.3 Base-Emitter Saturation Voltage vs Collector Current

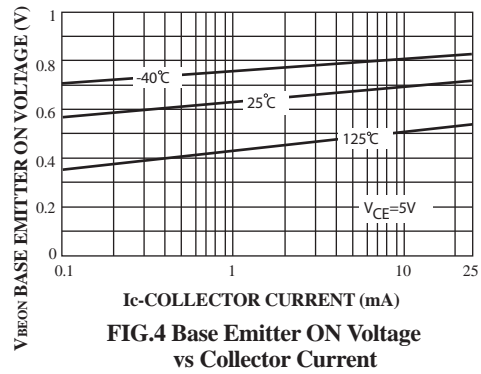


FIG.4 Base Emitter ON Voltage vs Collector Current

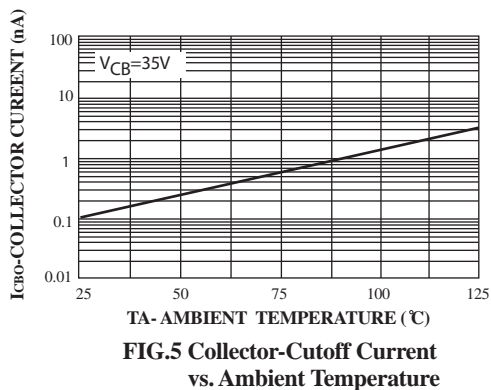


FIG.5 Collector-Cutoff Current vs. Ambient Temperature

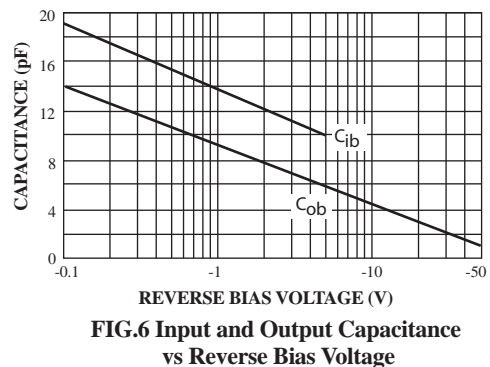


FIG.6 Input and Output Capacitance vs Reverse Bias Voltage