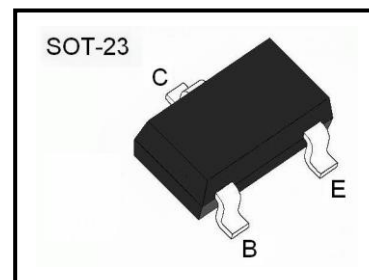


General Purpose Amplifier

Features

This device is designed for use as a medium power amplifier and switch requiring collector currents up to 500 mA.

- Marking: 2X



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	60	V
Collector-Emitter Voltage	BV_{CEO}	40	V
Emitter-Base Voltage	BV_{EBO}	56	V
Collector Current	I_C	1.0	A
Collector Power Dissipation	P_{CM}	0.35	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV_{CBO}	$I_C = 100\mu A, I_E = 0$	60			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = 1mA, I_B = 0$	40			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = 100\mu A, I_C = 0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB} = 40V, I_E = 0$			100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			100	nA
DC current gain	h_{FE}	$V_{CE} = 1V, I_C = 1mA$ $V_{CE} = 1V, I_C = 10mA$ $V_{CE} = 1V, I_C = 150mA$ $V_{CE} = 2V, I_C = 500mA$	40 80 100 40		300	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 150mA, I_B = 15mA$ $I_C = 500mA, I_B = 50mA$			0.4 0.75	V
Base -emitter saturation voltage	$V_{BE(sat)}$	$I_C = 150mA, I_B = 15mA$ $I_C = 500mA, I_B = 50mA$			0.95 1.2	V
Current Gain - Bandwidth Product	f_T	$I_C = 20mA, V_{CE} = 10V, f = 100MHz$	250			MHz

Typical Characteristics

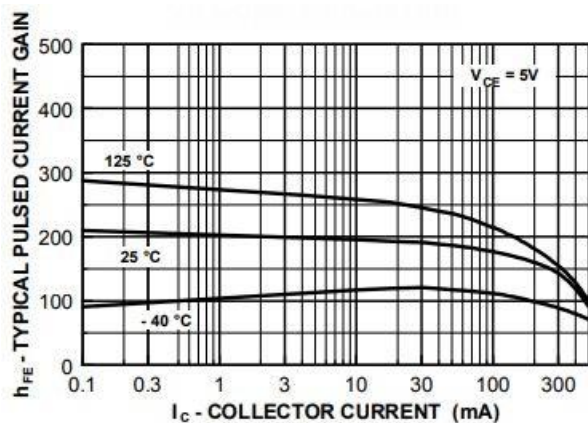


Figure 1. Typical Pulsed Current Gain vs Collector Current

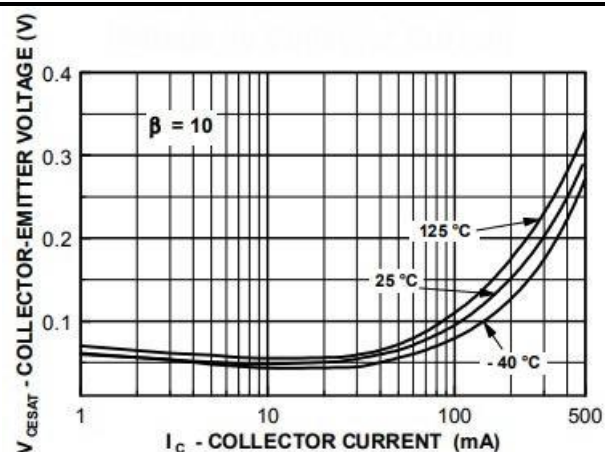


Figure 2. Collector-Emitter Saturation Voltage vs Collector Current

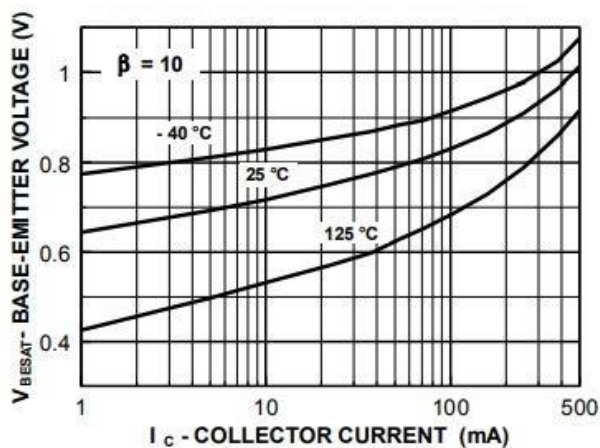


Figure 3. Base-Emitter Saturation Voltage vs Collector Current

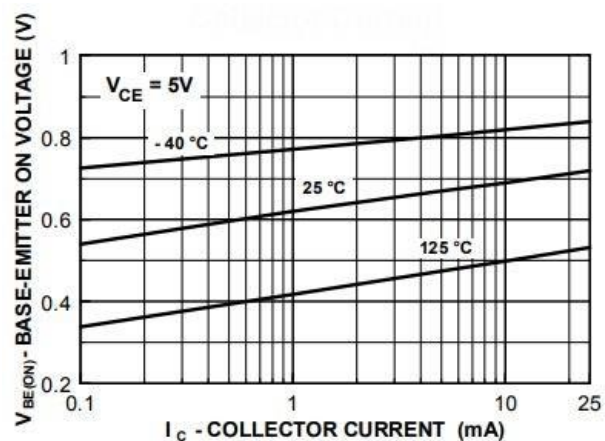


Figure 4. Base-Emitter ON Voltage vs Collector Current

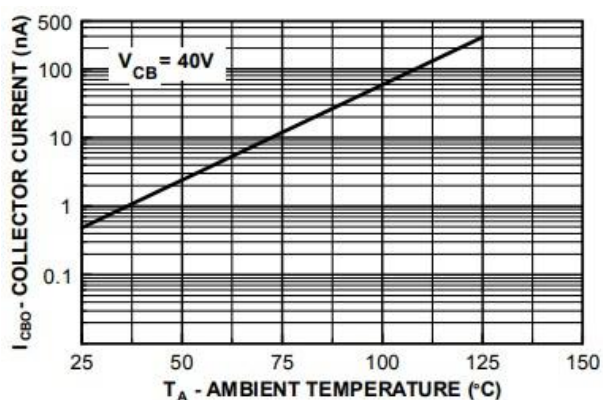


Figure 5. Collector-Cutoff Current vs Ambient Temperature

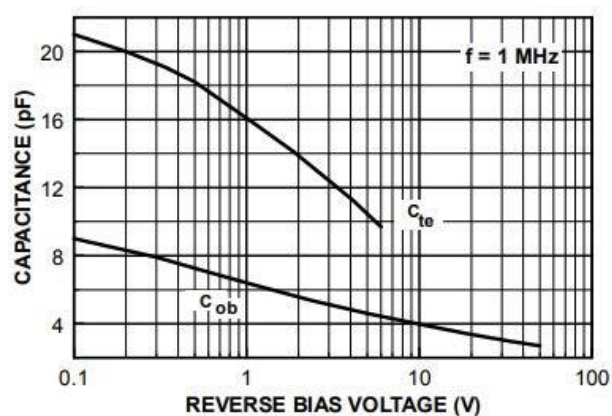


Figure 6. Emitter Transition and Output Capacitance vs Reverse Bias Voltage

Package Dimensions (Unit:mm)

