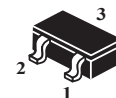
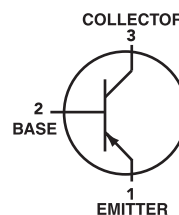


PNP Epitaxial Planar Transistors

 Lead(Pb)-Free



SC-59

ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

Rating	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	-30	V
Collector-Emitter Voltage	V_{CEO}	-25	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-700	A
Collector Power Dissipation	P_D	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage $I_C=-100\mu\text{A}, I_E=0$	BV_{CBO}	-30	-	-	V
Collector-Emitter Breakdown Voltage $I_C=-1\text{mA}, I_B=0$	BV_{CEO}	-25	-	-	V
Emitter-Base Breakdown Voltage $I_E=-100\mu\text{A}, I_C=0$	BV_{EBO}	-5	-	-	V
Collector Cutoff Current $V_{CB}=-30\text{V}, I_E=0$	I_{CBO}	-	-	-0.1	μA
Emitter Cutoff Current $V_{EB}=-5\text{V}, I_E=0$	I_{EBO}	-	-	-0.1	μA

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
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ON CHARACTERISTICS⁽¹⁾

DC Current Gain $V_{CE}=-1\text{V}, I_C=-100\text{mA}$ $V_{CE}=-1\text{V}, I_C=-700\text{mA}$	h_{FE1} h_{FE2}	110 50	- -	400 -	- -
Collector-Emitter Saturation Voltage $I_C=-700\text{mA}, I_B=-70\text{mA}$	$V_{CE(sat)}$	-	-	-0.6	V
Base-Emitter Voltage $V_{CE}=-6\text{V}, I_C=-10\text{mA}$	$V_{BE(on)}$	-0.6	-	-0.7	V

1. Pulse Test: Pulse Width $\leq 350\mu\text{s}$, Duty Cycle $\leq 2\%$

DYNAMIC CHARACTERISTICS

Transition Frequency $V_{CE}=-6\text{V}, I_C=-10\text{mA}$	f_T	-	160	-	MHz
Output Capacitance $V_{CB}=-6\text{V}, I_E=0, f=1\text{MHz}$	C_{ob}	-	17	-	pF

CLASSIFICATION OF h_{FE1}

Marking	BV1	BV2	BV3	BV4	BV5
Rank	1	2	3	4	5
h_{FE1}	110-180	135-220	170-270	200-320	250-400

ELECTRICAL CHARACTERISTIC CURVES

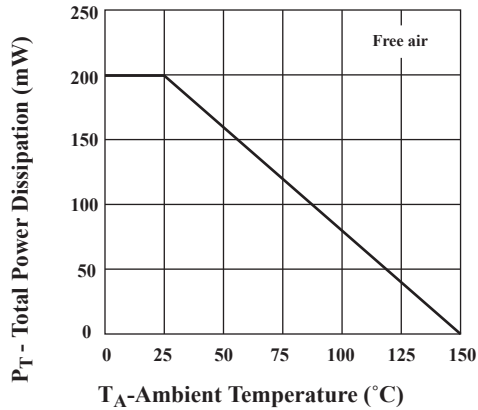


Fig.1 TOTAL POWER DISSIPATION VS. AMBIENT TEMPERATURE

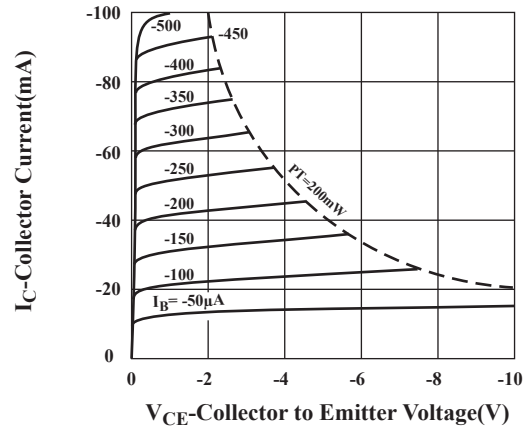


Fig.2 COLLECTOR CURRENT VS. COLLECTOR TO EMITTER VOLTAGE

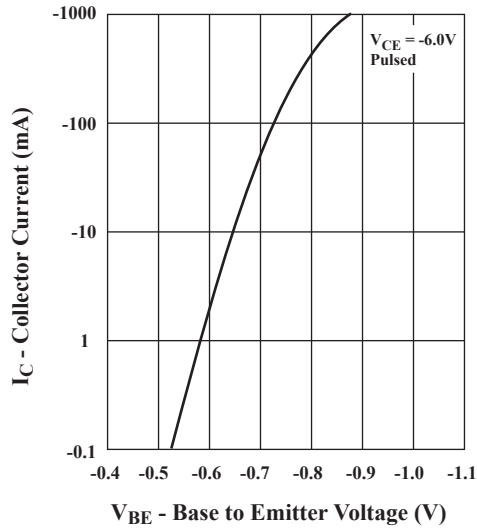


Fig.3 COLLECTOR CURRENT VS. BASE TO EMITTER VOLTAGE

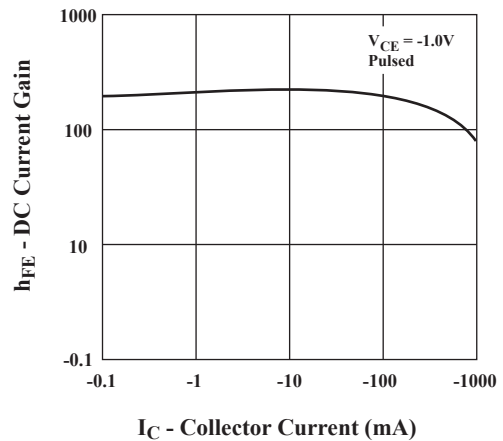


Fig.4 DC CURRENT GAIN VS. COLLECTOR CURRENT

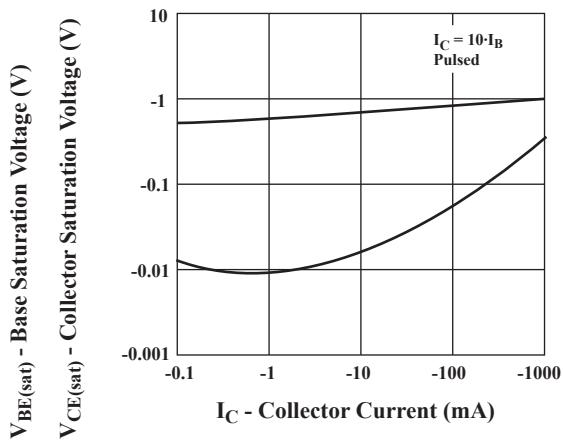


Fig.5 BASE AND COLLECTOR SATURATION VOLTAGE VS. COLLECTOR CURRENT

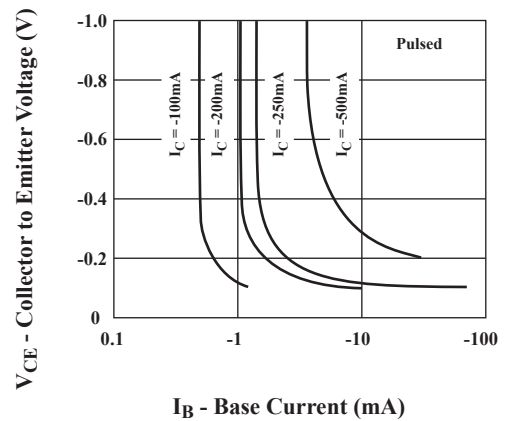


Fig.6 COLLECTOR TO EMITTER VOLTAGE VS. BASE CURRENT

SC-59 Outline Dimension

Unit:mm

