

### 2SB647/2SB647A TRANSISTOR (PNP)

#### FEATURE

Power dissipation

$$P_{CM}: 0.9 \text{ W (Tamb=25°C)}$$

Collector current

$$I_{CM}: -1 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 120 \text{ V}$$

Operating and storage junction temperature range

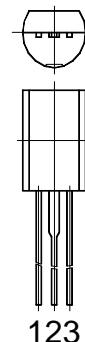
$$T_J, T_{stg}: -55°C \text{ to } +150°C$$

#### TO-92MOD

1. EMITTER

2. COLLECTOR

3. BASE



123

#### ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_E = 0$	-120		V
Collector-emitter breakdown voltage <b>2SB647</b> <b>2SB647A</b>	$V_{(BR)CEO}$	$I_C = -1\text{mA}, I_B = 0$	-80 -100		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}, I_C = 0$	-5		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -100 \text{ V}, I_E = 0$		-10	$\mu\text{A}$
DC current gain	$h_{FE(1)*}$	$V_{CE} = -5 \text{ V}, I_C = -150\text{mA}$	60 60	320 200	
	$h_{FE(2)}$	$V_{CE} = -5 \text{ V}, I_C = -500\text{mA}$	30		
Collector-emitter saturation voltage	$V_{CEsat}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$		-1	V
Transition frequency	$f_T$	$V_{CE} = -5\text{V}, I_C = -150\text{mA}$	140		MHz
Output capacitance	$C_{ob}$	$V_{CE} = -10\text{V}, I_E = 0$ $f = 1 \text{ MHz}$		20	pF

#### CLASSIFICATION OF $h_{FE}$

Rank		B	C	D
Range	<b>2SB647</b>	60-120	100-200	160-320
	<b>2SB647A</b>	60-120	100-200	-