



TO-92 Plastic-Encapsulate Transistors

2SA836 TRANSISTOR (PNP)

FEATURES

Power dissipation

$$P_{CM} : 0.2 \text{ W (Tamb=25}^{\circ}\text{C)}$$

Collector current

$$I_{CM} : -0.1 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO} : -55 \text{ V}$$

Operating and storage junction temperature range

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

TO-92

1. EMITTER
2. COLLECTOR
3. BASE



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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_E = 0$	-55			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1\text{ mA}, I_B = 0$	-55			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}	$V_{CB} = -18\text{V}, I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -2\text{V}, I_C = 0$			-0.05	μA
DC current gain	h_{FE}	$V_{CE} = -12\text{ V}, I_C = -2\text{ mA}$	160		500	
Collector-emitter saturation voltage	V_{CEsat}	$I_C = -10\text{ mA}, I_B = -1\text{ mA}$			-0.5	V
Base-emitter voltage	$V_{BE(ON)}$	$V_{CE} = -12\text{ V}, I_C = -2\text{ mA}$			-0.75	V
Transition frequency	f_T	$V_{CE} = -12\text{ V}, I_C = -2\text{ mA}$	150			MHz
Output capacitance	C_{ob}	$V_{CE} = -10\text{V}, I_E = 0, f = 1\text{ MHz}$			4	pF
Noise figure	NF	$V_{CE} = -6\text{V}, I_C = 0.1\text{ mA}, f = 1\text{ 0Hz}, R_G = 10\text{K}\Omega$			5	dB
		$V_{CE} = -6\text{V}, I_C = 0.1\text{ mA}, f = 1\text{ kHz}, R_G = 10\text{K}\Omega$			1	

CLASSIFICATION OF h_{FE}

Rank	C	D
Range	160-320	250-500