



TO-126C Plastic-Encapsulated Transistors

2SB649/2SB649A TRANSISTOR (PNP)

FEATURES

Power dissipation

$$P_{CM}: 1 \text{ W (Tamb=25°C)}$$

Collector current

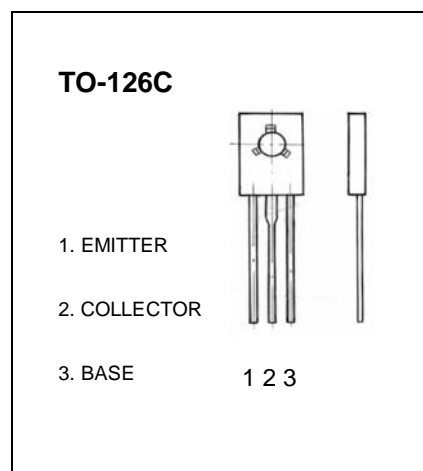
$$I_{CM}: -1.5 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: -180 \text{ V}$$

Operating and storage junction temperature range

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



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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -1\text{mA}, I_E = 0$	-180			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10\text{mA}, I_B = 0$	2SB649 -120 2SB649A -160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -1\text{mA}, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -160\text{V}, I_E = 0$			-10	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -4\text{V}, I_C = 0$			-10	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = -5\text{V}, I_C = -150\text{mA}$	2SB649 60 2SB649A 60		320 200	
	$h_{FE(2)}$	$V_{CE} = -5\text{V}, I_C = -500\text{mA}$	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$			-1	V
Base-emitter voltage	V_{BE}	$V_{CE} = -5\text{V}, I_C = -150\text{mA}$			-1.5	V
Transition frequency	f_T	$V_{CE} = -5\text{V}, I_C = -150\text{mA}$		140		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		27		pF

CLASSIFICATION OF $h_{FE(1)}$

Rank	B	C	D
Range	60-120	100-200	160-320
Marking			