

2SD669 TRANSISTOR (NPN)

FEATURES

Power dissipation

$$P_{CM}: 1 \text{ W (Tamb=25}^\circ\text{C)}$$

Collector current

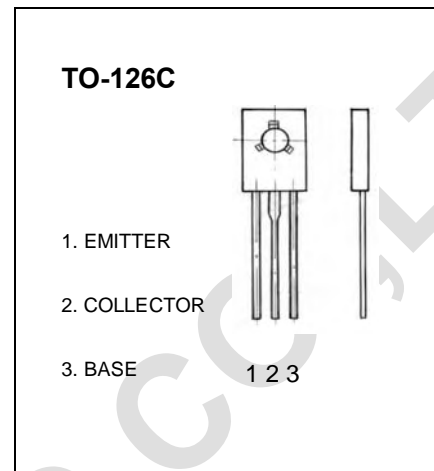
$$I_{CM}: 1.5 \text{ A}$$

Collector-base voltage

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

Operating and storage junction temperature range

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



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	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	120			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	$h_{FE(1)}$	$V_{CE}=5\text{V}, I_C=150\text{mA}$	60		320	
	$h_{FE(2)}$	$V_{CE}=5\text{V}, I_C=500\text{mA}$	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}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		14		pF

CLASSIFICATION OF $h_{FE(1)}$

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

