



# TO-126 Plastic-Encapsulate Transistors

## D669 TRANSISTOR ( NPN )

### FEATURES

Power dissipation

$P_{CM}$ : 1.0 W ( $T_{amb}=25^{\circ}C$ )

Collector current

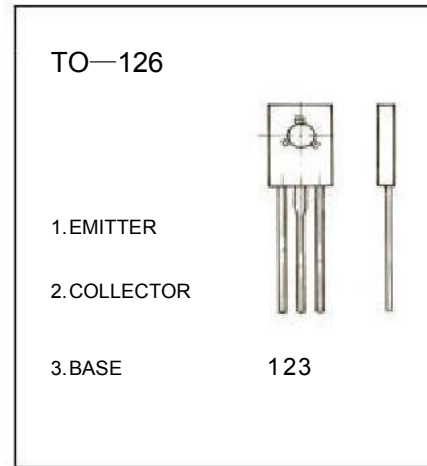
$I_{CM}$ : 1.0 A

Collector-base voltage

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

Operating and storage junction temperature range

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



### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	180			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	120			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=160V, I_E=0$			10	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4V, I_C=0$			10	$\mu A$
DC current gain(note)	$H_{FE}$	$V_{CE}=5V, I_C=150mA$	60		320	
DC current gain(note)	$H_{FE}$	$V_{CE}=5V, I_C=500mA$	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			1	V
Base-emitter voltage	$V_{BE}$	$V_{CE}=5V, I_C=150mA$			1.5	V
Transition frequency	$f_r$	$V_{CE}=5V, I_C=150mA$		140		MHz

### CLASSIFICATION OF $h_{FE(1)}$

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