

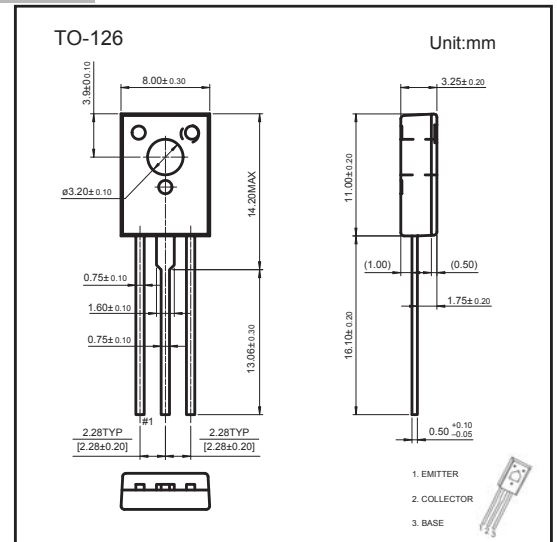
## TO-126 Plastic-Encapsulate Transistors

### FEATURES

- High Forward Current Transfer Ratio  $h_{FE}$  Which has Satisfactory Linearity
- Low Collector-Emitter Saturation Voltage  $V_{CE(sat)}$
- Allowing Supply with the Radial Taping
- TRANSISTOR (NPN)

### MECHANICAL DATA

- Case style: TO-126 molded plastic
- Mounting position: any



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CB0}$	Collector-Base Voltage	60	V
$V_{CEO}$	Collector-Emitter Voltage	60	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current	3	A
$P_C$	Collector Power Dissipation	1.25	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	100	°C/W
$T_j$	Junction Temperature	150	°C
$T_{stg}$	Storage Temperature	-55~+150	°C

## ELECTRICAL CHARACTERISTICS $T_a=25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C=30\text{mA}, I_B=0$	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	6			V
Collector cut-off current	$I_{CB0}$	$V_{CB}=60\text{V}, I_E=0$			200	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CE}=60\text{V}, I_B=0$			300	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=6\text{V}, I_C=0$			1	mA
DC current gain	$h_{FE(1)}^*$	$V_{CE}=4\text{V}, I_C=1\text{A}$	40		250	
	$h_{FE(2)}^*$	$V_{CE}=4\text{V}, I_C=3\text{A}$	10			
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C=3\text{A}, I_B=0.375\text{A}$			1.2	V
Base-emitter voltage	$V_{BE}^*$	$V_{CE}=4\text{V}, I_C=3\text{A}$			1.8	V
Transition frequency	$f_T$	$V_{CE}=5\text{V}, I_C=0.1\text{A}, f=10\text{MHz}$		30		MHz

\*Pulse test: pulse width  $\leq 300\mu\text{s}$ , duty cycles  $\leq 2.0\%$ .

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

RANK	P	Q	R
RANGE	40-90	70-150	120-250

# RATINGS AND CHARACTERISTIC CURVES

## Typical Characteristics

