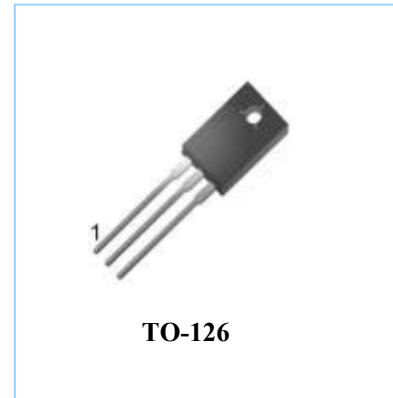
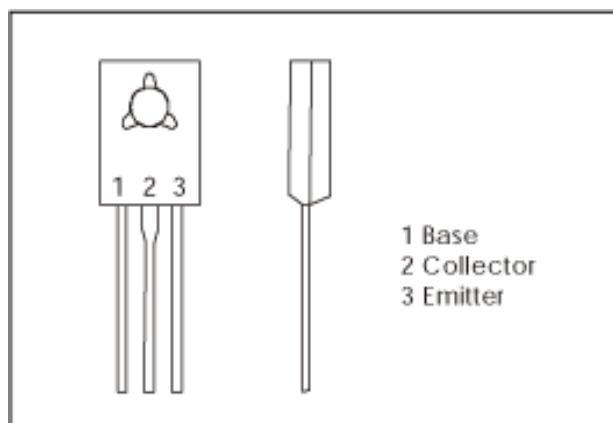


TO-126 Triple Diffused NPN Transistor**FEATURES**

High Speed Switching
 Suitable for Switching Regulator and
 Motor Control
 High Collector Voltage: $V_{CBO} = 700\text{ V}$
 Excellent Switching Times
 $t_f = 0.3\ \mu\text{s}$

**ABSOLUTE MAXIMUM RATINGS** ($T_A=25^\circ$)

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	700	V
Collector-Emitter Voltage	V_{CEO}	400	
Emitter-Bias Voltage	V_{EBO}	9	
Collector Current (DC)	I_C	1.5	A
Collector Current (Pulse)	I_C	3.0	
Base Current (DC)	I_B	0.75	
Collector Dissipation($T_c=25^\circ\text{C}$)	P_C	11.2	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-60~150	

PIN CONFIGURATION**ORDERING INFORMATION**

Part Number	Operating Temperature Range	Package Type
AV13003	$-55^\circ\text{C} \sim +150^\circ\text{C}$	TO-126

ELECTRICAL CHARACTERISTICS ($T_A=+25^{\circ}\text{C}$).

Characteristics	Symbol	Min	Typ	Max	Unit
Collector- Emitter Sustaining Voltage $I_B=0, I_C=10\text{mA}$	$V_{CEO(SUS)}$	400			V
Emitter Cutoff Current $V_{EB}=9\text{V}, I_C=0$	I_{EBO}			1	mA
DC Current Gain (Note 1) $V_{CE}=2\text{V}, I_C=0.5\text{A}$ $V_{CE}=2\text{V}, I_C=1\text{A}$	h_{FE}	8 5		60 40	μA
Collector Emitter Saturation Voltage(Note 1) $I_C=0.5\text{A}, I_B=0.1\text{A}$ $I_C=1\text{A}, I_B=0.25\text{A}$	$V_{CE(SAT)}$			0.5 1	V
Base-Emitter Saturation Voltage (Note 1) $I_C=0.5\text{A}, I_B=0.1\text{A}$ $I_C=1\text{A}, I_B=0.25\text{A}$	$V_{BE(SAT)}$			1.0 1.2	
Storage Time $V_{CC}=125\text{V}, I_C=1\text{A}$ $I_{B1}=I_{B2}=0.2\text{A}$	t_s			2	μS
Fall Time $V_{CC}=125\text{V}, I_C=1\text{A}$ $I_{B1}=I_{B2}=0.2\text{A}$	t_f			0.3	

Note 1 : Pulse Test $PW \leq 300 \mu S$, Duty Cycle $\leq 2\%$

TYPICAL CHARACTERISTICS

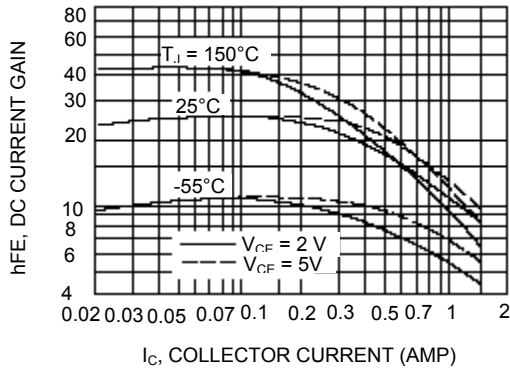


Figure 1. DC Current Gain

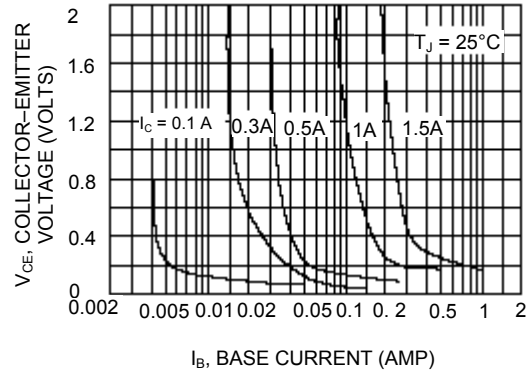


Figure 2. Collector Saturation

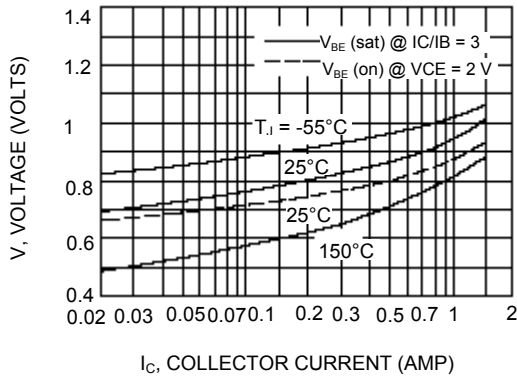


Figure 3. Base-Emitter Voltage

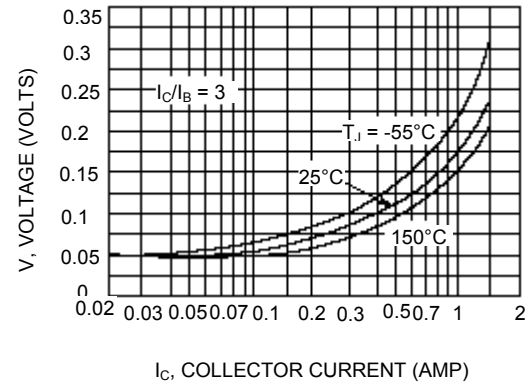


Figure 4. Collector-Emitter Saturation Region

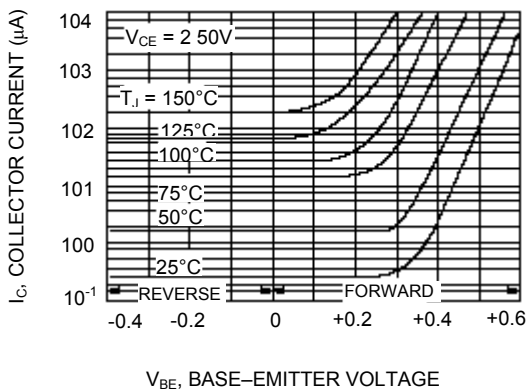


Figure 5. Collector Cutoff Region

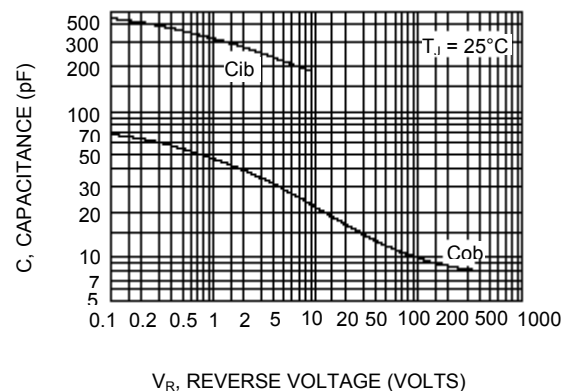


Figure 6. Capacitance