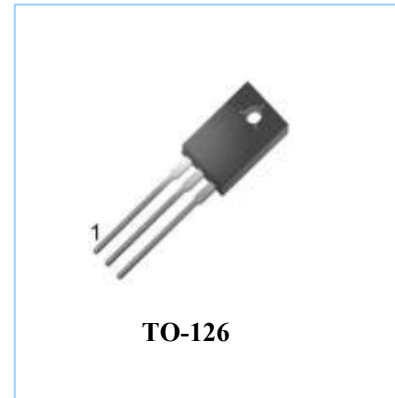
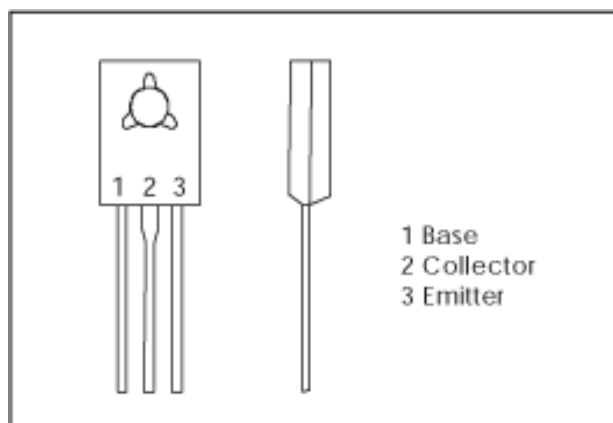


**TO-126 Triple Diffused NPN Transistor****FEATURES**

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	$\mu A$
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	$\mu S$
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

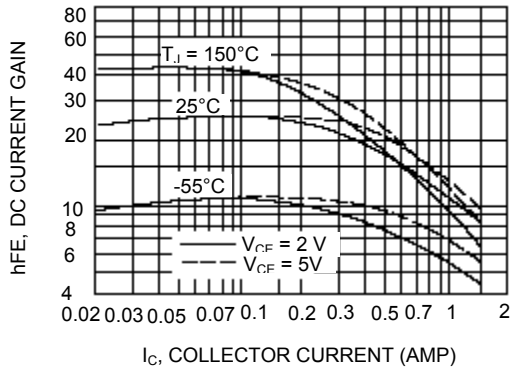


Figure 1. DC Current Gain

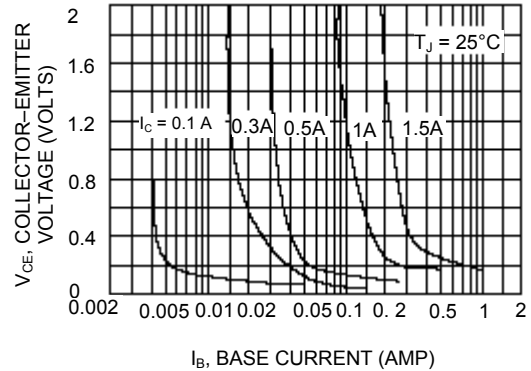


Figure 2. Collector Saturation

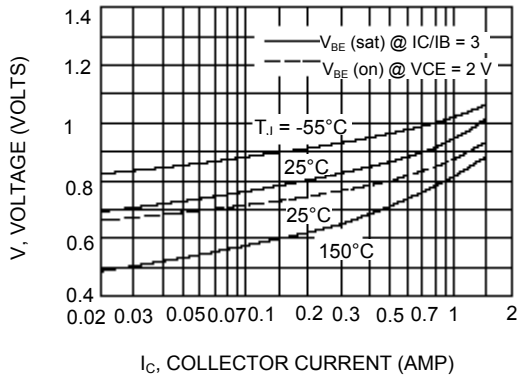


Figure 3. Base-Emitter Voltage

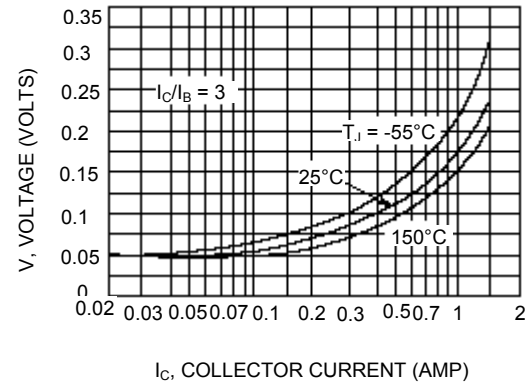


Figure 4. Collector-Emitter Saturation Region

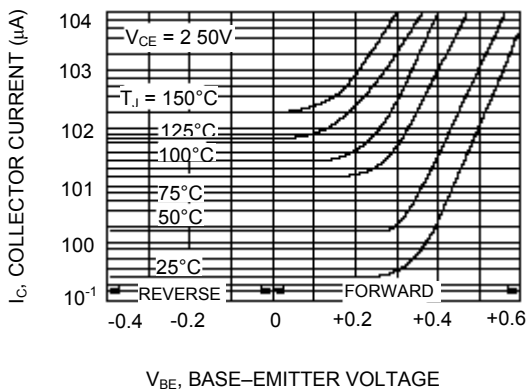


Figure 5. Collector Cutoff Region

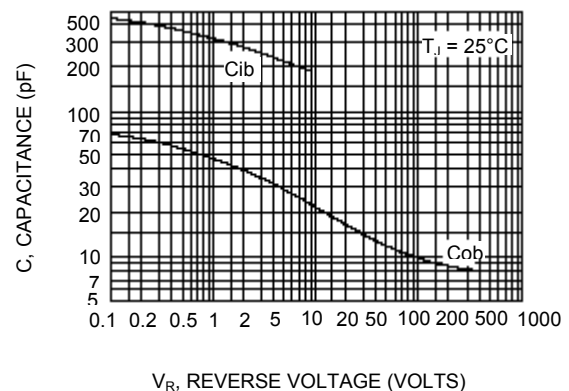


Figure 6. Capacitance