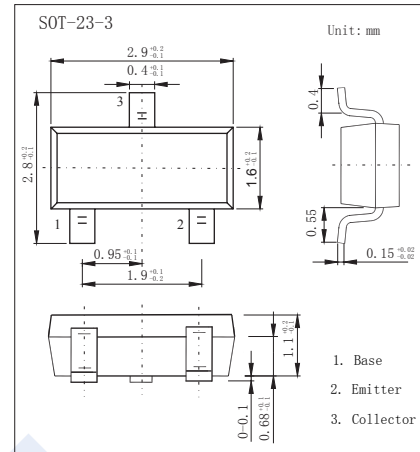


## NPN Transistors

## 2SC3739

## ■ Features

- High Gain Bandwidth Product:  $f_r=200\text{MHz}(\text{min})$
- Complementary to 2SA1464

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	60	V
Collector - Emitter Voltage	$V_{CE0}$	40	
Emitter - Base Voltage	$V_{EB0}$	5	
Collector Current - Continuous	$I_C$	500	mA
Collector Power Dissipation	$P_C$	200	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 150	

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_C = 100 \mu\text{A}, I_E = 0$	60			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_C = 1 \text{ mA}, I_B = 0$	40			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = 100 \mu\text{A}, I_C = 0$	5			
Collector-base cut-off current	$I_{CB0}$	$V_{CB} = 40\text{V}, I_E = 0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = 4\text{V}, I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$		0.25	0.75	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$		1	1.2	
DC current gain	$h_{FE(1)}$	$V_{CE} = 1\text{V}, I_C = 150 \text{ mA}$	75	150	300	
	$h_{FE(2)}$	$V_{CE} = 2\text{V}, I_C = 500 \text{ mA}$	20	75		
Turn-on time	$t_{on}$	$V_{CC} = 30\text{V}, I_C = 150 \text{ mA}, I_{B1} = -I_{B2} = 15 \text{ mA}$			35	ns
Storage time	$t_{stg}$				225	
Turn-off time	$t_{off}$				275	
Collector output capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		3.5	8	pF
Transition frequency	$f_T$	$V_{CE} = 10\text{V}, I_E = -20 \text{ mA}$	200	400		MHz

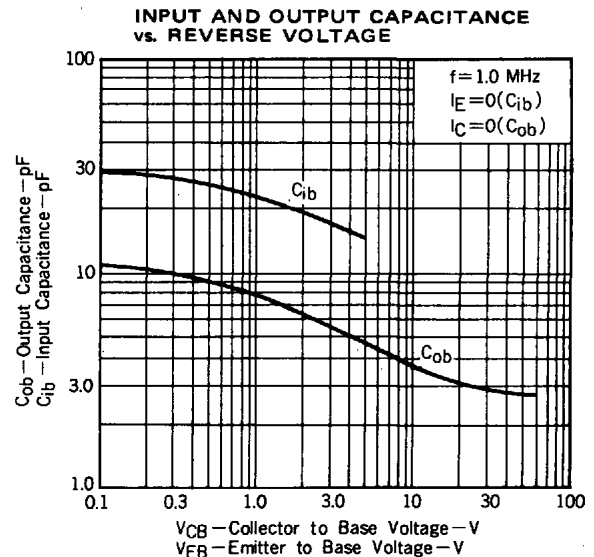
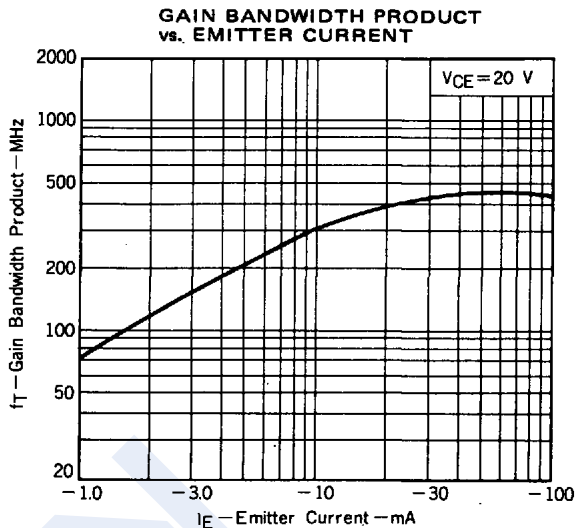
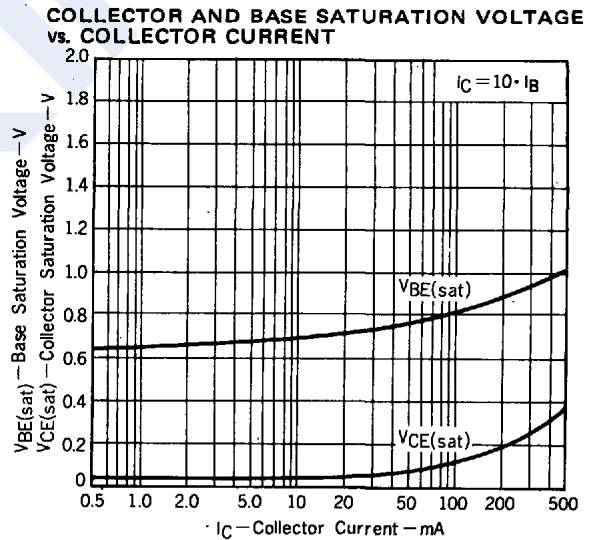
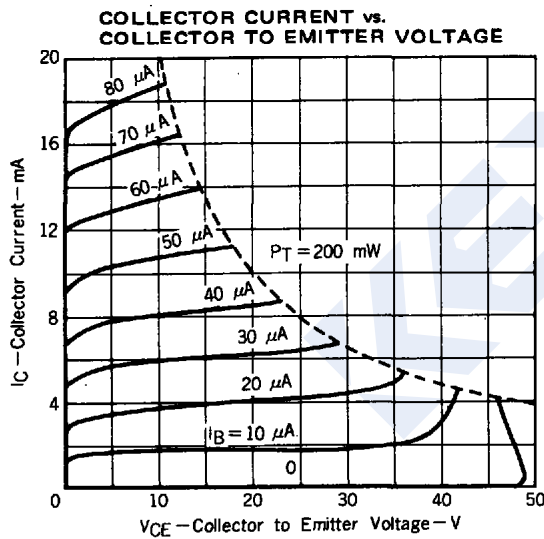
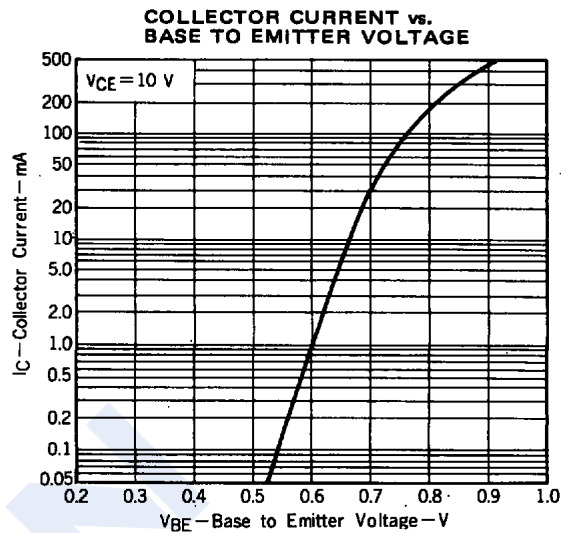
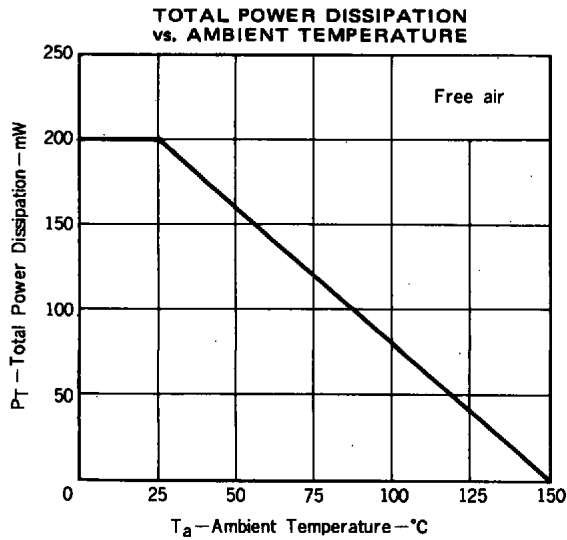
■ Classification of  $h_{FE(1)}$ 

Type	2SC3739-B12	2SC3739-B13	2SC3739-B14
Range	75-150	100-200	150-300
Marking	B12	B13	B14

# NPN Transistors

## 2SC3739

■ Typical Characteristics



### NPN Transistors

### 2SC3739

■ Typical Characteristics

