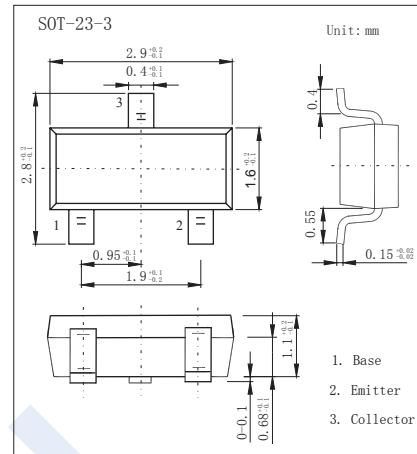


NPN Transistors

2SC3739-HF

■ Features

- High Gain Bandwidth Product: $f_r=200\text{MHz}(\text{min})$
- Complementary to 2SA1464-HF
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



■ 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	μA
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

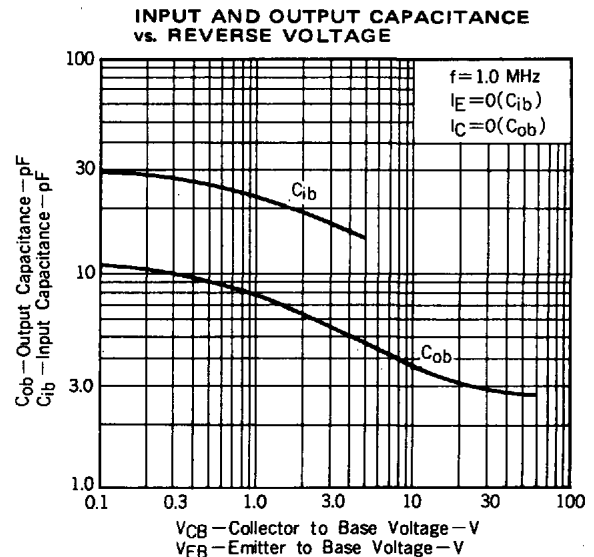
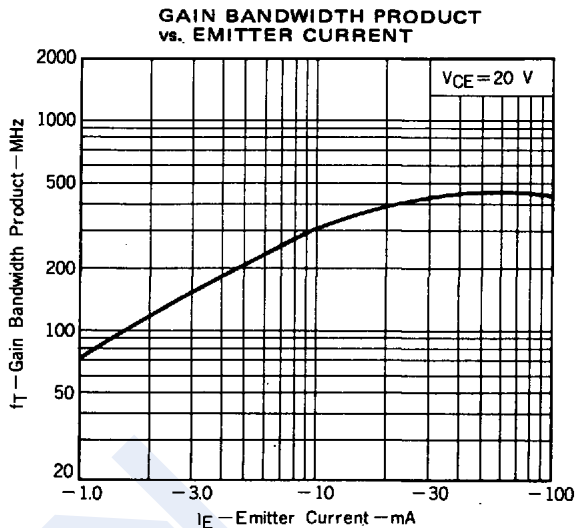
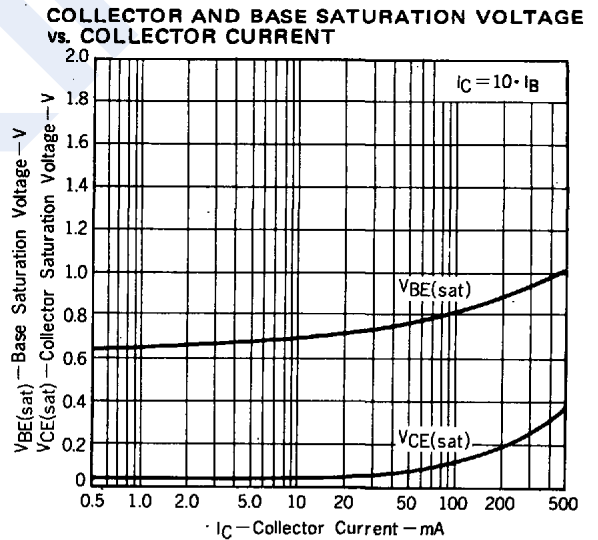
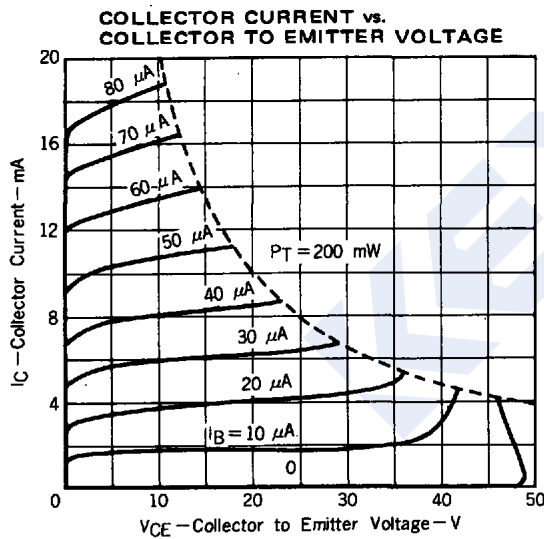
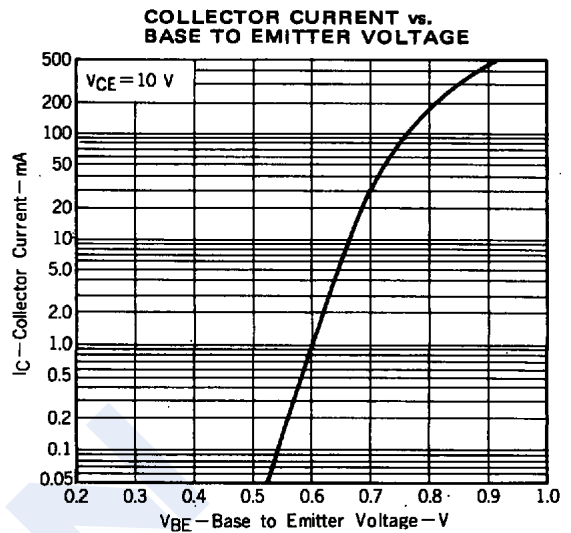
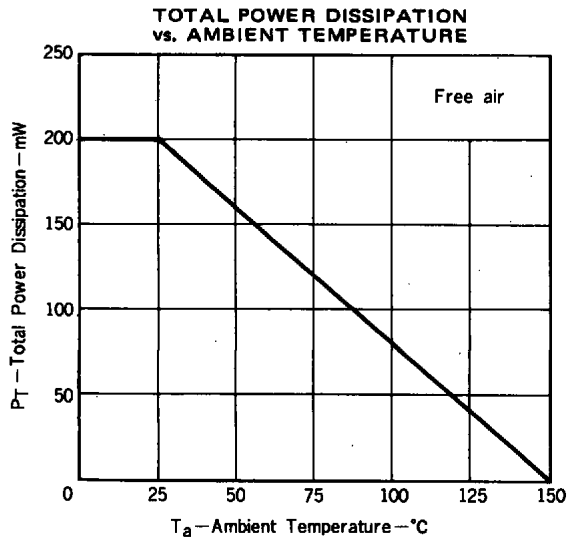
■ Classification of $h_{FE(1)}$

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

NPN Transistors

2SC3739-HF

■ Typical Characteristics



NPN Transistors

2SC3739-HF

■ Typical Characteristics

