



Features

- NPN Silicon Planar Epitaxial Transistors.
- Complementary Transistors for use in Driver and Output Stages of Audio Amplifiers

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	45	V
Collector-Emitter Voltage	V _{CES}	50	
Emitter-Base Voltage	V _{EBO}	5	
Collector Current Continuous Peak	I _C	800	mA
	I _{CM}	1	A
Emitter Current Peak	I _{EM}	1	A
Base Current Continuous	I _B	100	mA
Base Current Peak	I _{BM}	200	
Power Dissipation at Ta = 25°C Derate above 25°C	P _{TA}	625	mW
		5	mW/°C
Operating and Storage Junction Temperature Range	T _J , T _{STG}	-65 to +150	°C
Thermal Resistance			
From Junction to Ambient in Free Air	R _{th(j-a)}	200	°C / W

Electrical Characteristics (Ta = 25°C Unless Otherwise Specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit	
Collector-Emitter Voltage	V _{CEO}	I _C = 10mA, I _B = 0	45	-	-	V	
	V _{CES}	I _C = 100mA, I _E = 0	50	-	-		
Emitter-Base Voltage	V _{EBO}	I _E = 10mA, I _C = 0	5	-	-		
Collector-Cut off Current	I _{CBO}	V _{CB} = 20V, I _E = 0	-	-	100	nA	
		V _{CB} = 20V, I _E = 0, T _J = 150°C	-	-	5	μA	
Emitter Cut off Current	I _{EBO}	V _{EB} = 5V, I _C = 0	-	-	10	μA	
Collector Emitter Saturation Voltage	V _{CE (SAT)} ¹	I _C =500mA, I _B =50mA	-	-	0.7	V	
Base Emitter On Voltage	V _{BE (ON)} ¹	I _C =500mA, V _{CE} =1V	-	-	1.2		
DC Current Gain	h _{FE} *	I _C = 100mA, V _{CE} = 1V	100	-	400	-	
			Group-10	63	-		160
			Group-16	100	-		250
			Group-25	160	-		400
			Group-40	250	-		600
		I _C =500mA, V _{CE} =1V	40	-	-		

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Small Signal Characteristics						
Transistors Frequency	f_T	$I_C = 10\text{mA}$, $V_{CE} = 5\text{V}$, $f = 35\text{MHz}$	-	200	-	MHz
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}$, $f = 1\text{MHz}$	-	5	-	pF

Note:

1. Pulse Condition: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$.
2. For PNP device voltage and current values will be negative (-).

Typical Characteristics Curves

Fig 1: Static Characteristic

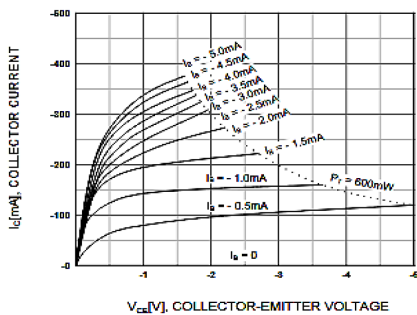


Fig 2: DC current Gain

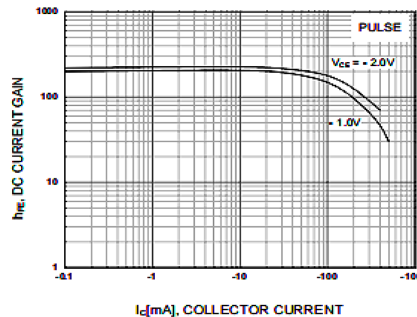


Fig 3: Base-Emitter On Voltage

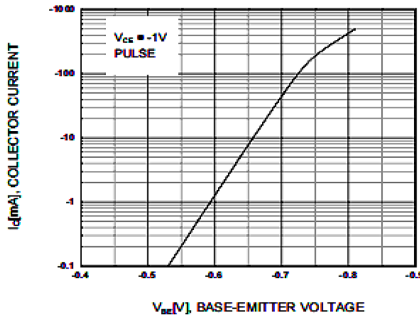


Fig 4: Static Characteristic

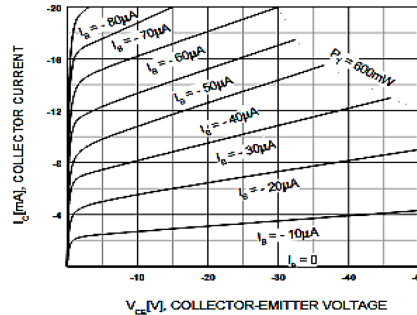


Fig 5: Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

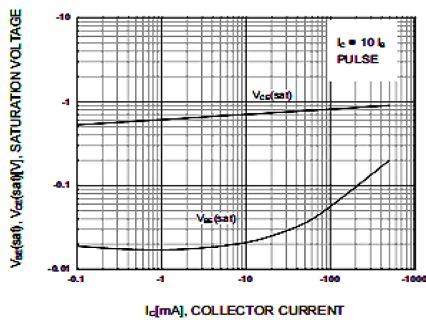


Fig 6: Gain Bandwidth Product

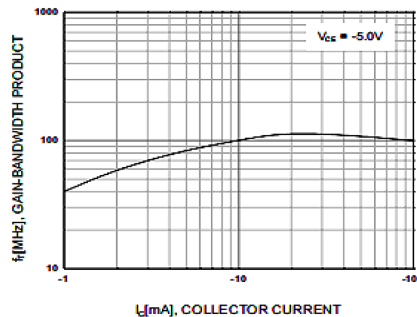
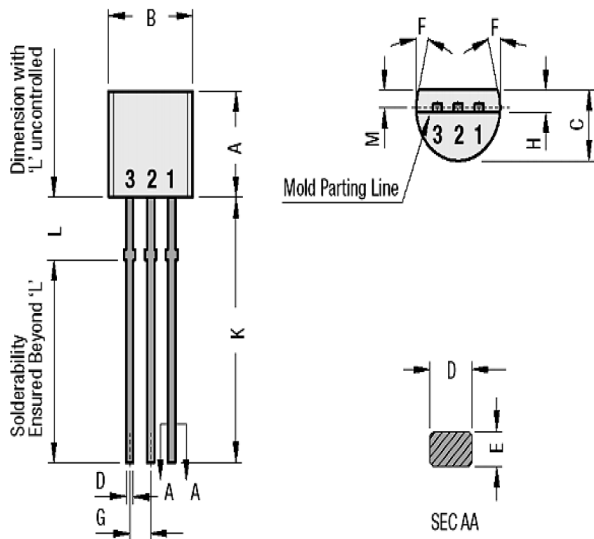


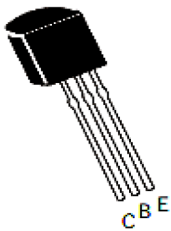
Fig 6: Gain Bandwidth Product

Diagram

TO-92 Leaded Plastic Package



Dim.	Min.	Max.
A	4.32	5.33
B	4.45	5.2
C	3.18	4.19
D	0.4	0.55
E	0.3	0.55
F	5°	
G	1.14	1.4
H	1.2	1.4
K	12.7	-
L	1.982	2.082
M	1.03	1.2



PIN Configuration

1. Emitter
2. Base
3. Collector

Part Number Table

Description	Part Number
Bipolar (BJT) Single Transistor, NPN, 45V, 100MHz, 500mA,	BC337

Dimensions : Millimetres

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