

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

**FEATURES**

TO-92

Power dissipation

$$P_{CM} : 0.625 \text{ W (Tamb=25 °C)}$$

Collector current

$$I_{CM} : -0.8 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO} : \text{BC327 } -50 \text{ V}$$

$$\text{BC328 } -30$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55 \text{ °C to } +150 \text{ °C}$$



- 1. COLLECTOR
- 2. BASE
- 3. EMITTER

**ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{CBO}$	$I_C = -100\mu A, I_E = 0$				
			BC327	-50		V
BC328			-30		V	
Collector-emitter breakdown voltage	$V_{CEO}$	$I_C = -10 \text{ mA}, I_B = 0$				
			BC327	-45		V
BC328			-25		V	
Emitter-base breakdown voltage	$V_{EBO}$	$I_E = -10\mu A, I_C = 0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -45V, I_E = 0$			-0.1	$\mu A$
			BC328			-0.1
Collector cut-off current	$I_{CEO}$	$V_{CE} = -40V, I_B = 0$			-0.2	$\mu A$
			BC328			-0.2
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -4V, I_C = 0$			-0.1	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE} = -1V, I_C = -100mA$	100		630	
	$h_{FE(2)}$	$V_{CE} = -1V, I_C = -300mA$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500 \text{ mA}, I_B = -50 \text{ mA}$			-0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -500 \text{ mA}, I_B = -50 \text{ mA}$			-1.2	V
Transition frequency	$f_T$	$V_{CE} = -5V, I_C = -10mA$ $f = 100MHz$	260			MHz

**$h_{FE}$  CLASSIFICATION**

Classification	16	25	40
$h_{FE1}$	100-250	160-400	250-630
$h_{FE2}$	60-	100-	170-

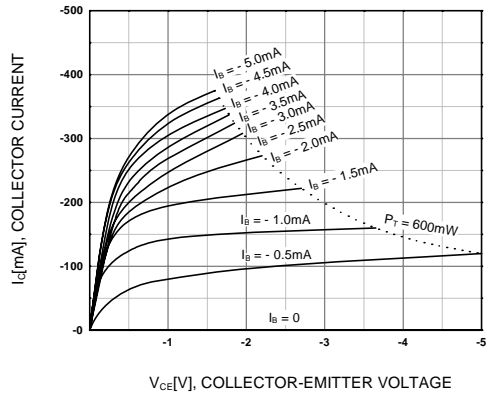


Figure 1. Static Characteristic

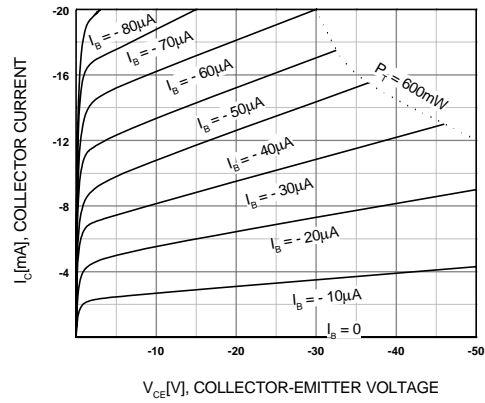


Figure 2. Static Characteristic

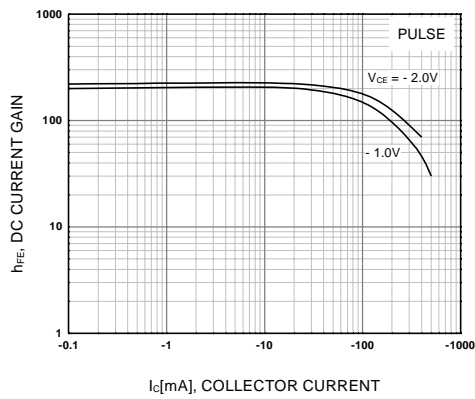


Figure 3. DC current Gain

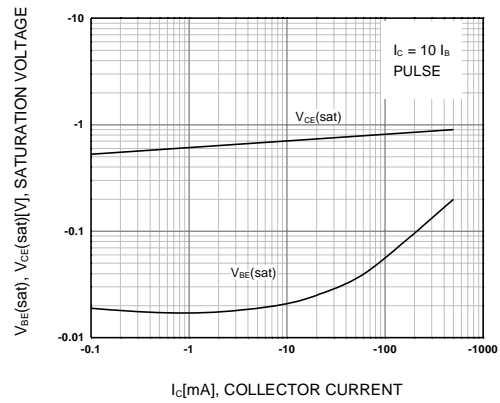


Figure 4. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

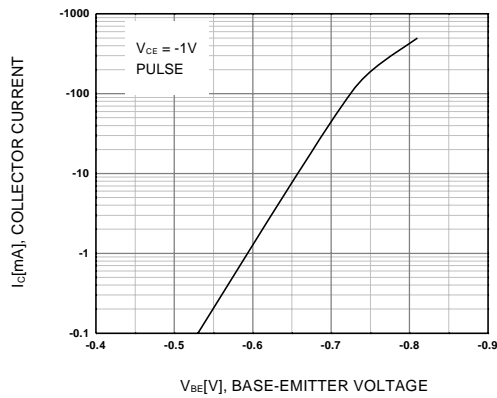


Figure 5. Base-Emitter On Voltage

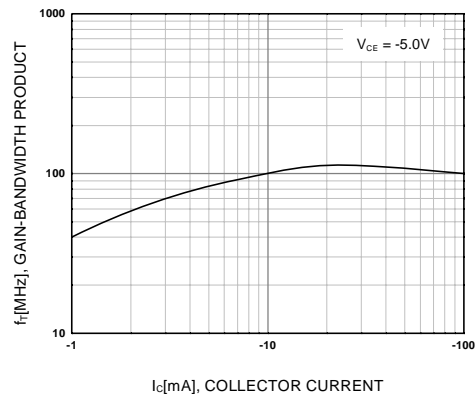
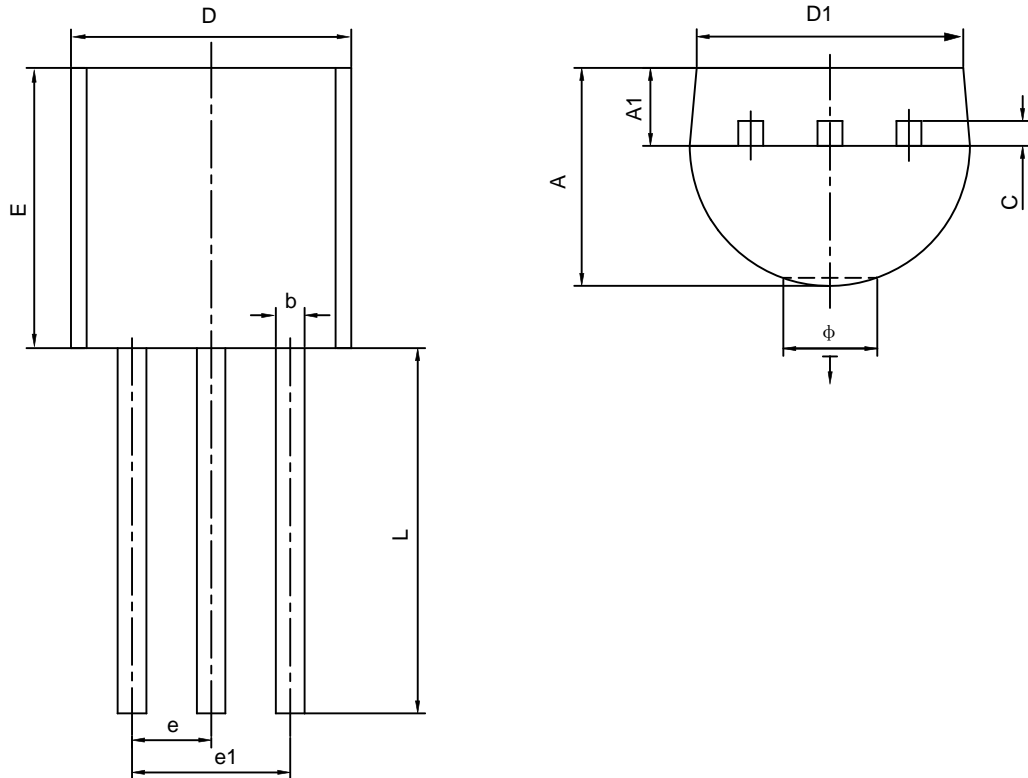


Figure 6. Gain Bandwidth Product

**TO-92 PACKAGE OUTLINE DIMENSIONS**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.400	4.700	0.173	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270TYP		0.050TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Ø		1.600		0.063
↓	0.000	0.380	0.000	0.015