

Features

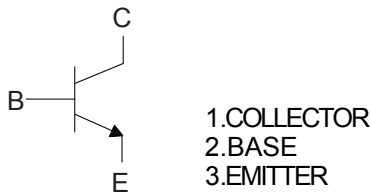
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings @ 25°C Unless Otherwise Specified

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 200°C/W Junction to Ambient

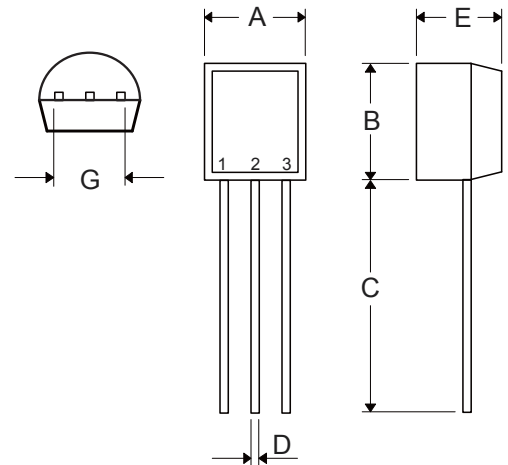
Parameter	Symbol	Rating	Unit
Collector-Base Voltage	BC337	50	V
	BC338	30	
Collector-Emitter Voltage	BC337	45	V
	BC338	25	
Emitter-Base Voltage	V_{EBO}	5	V
Continuous Collector Current	I_C	800	mA
Power Dissipation	P_D	625	mW

Internal Structure



**NPN
Plastic-Encapsulate
Transistors**

TO-92



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.169	0.185	4.30	4.70	
B	0.169	0.185	4.30	4.70	
C	0.500	-----	12.70	-----	
D	0.015	0.022	0.38	0.55	
E	0.130	0.146	3.30	3.70	
G	0.095	0.105	2.42	2.67	Straight Lead
	0.173	0.220	4.40	5.60	Bent

Electrical Characteristics @ $T_A=25^\circ\text{C}$ Unless Otherwise Specified

Parameter		Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	BC337	$V_{(BR)CBO}$	50			V	$I_C=100\mu\text{A}, I_E=0$
	BC338		30				
Collector-Emitter Breakdown Voltage	BC337	$V_{(BR)CEO}$	45			V	$I_C=10\text{mA}, I_B=0$
	BC338		25				
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	5			V	$I_E=10\mu\text{A}, I_C=0$
Collector Cutoff Current	BC337	I_{CBO}			0.1	μA	$V_{CB}=45\text{V}, I_E=0$
	BC338				0.1		$V_{CB}=25\text{V}, I_E=0$
Collector Cutoff Current	BC337	I_{CEO}			0.2	μA	$V_{CE}=40\text{V}, I_B=0$
	BC338				0.2		$V_{CE}=20\text{V}, I_B=0$
Emitter Cutoff Current		I_{EBO}			0.1	μA	$V_{EB}=4\text{V}, I_C=0$
DC Current Gain		$h_{FE(1)}$	100		630		$V_{CE}=1\text{V}, I_C=100\text{mA}$
		$h_{FE(2)}$	60				$V_{CE}=1\text{V}, I_C=300\text{mA}$
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$			0.7	V	$I_C=500\text{mA}, I_B=50\text{mA}$
Base-Emitter Saturation Voltage		$V_{BE(sat)}$			1.2	V	$I_C=500\text{mA}, I_B=50\text{mA}$
Transition Frequency		f_T	210			MHz	$V_{CE}=5\text{V}, I_C=10\text{mA}, f=100\text{MHz}$
Output Capacitance		C_{ob}		15		pF	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$

Classification of $h_{FE(1)}$

Rank	16	25	40
Range	100-250	160-400	250-600
Marking	A011	B011	C011

Curve Characteristics

Fig. 1 - Static Characteristics

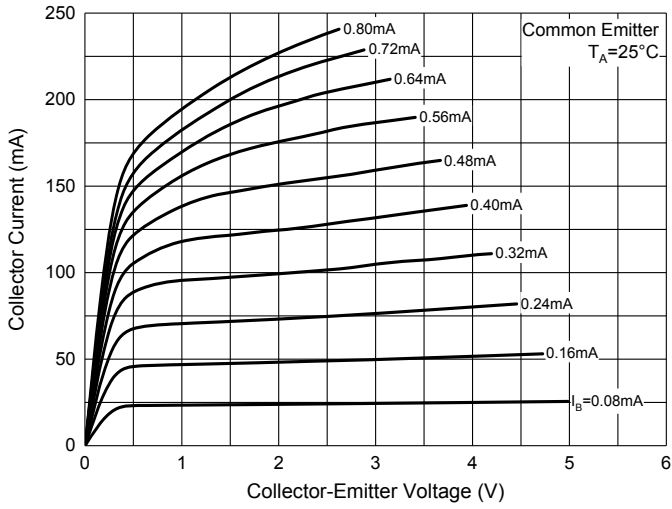


Fig. 2 - DC Current Gain Characteristics

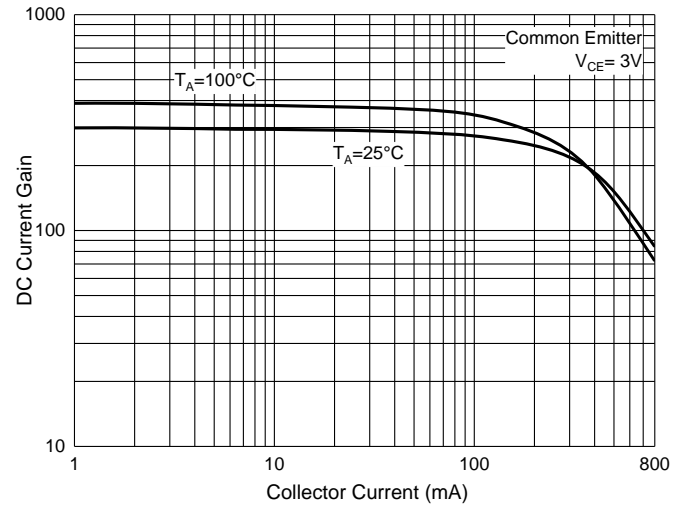


Fig. 3 - Base-Emitter Saturation Voltage Characteristics

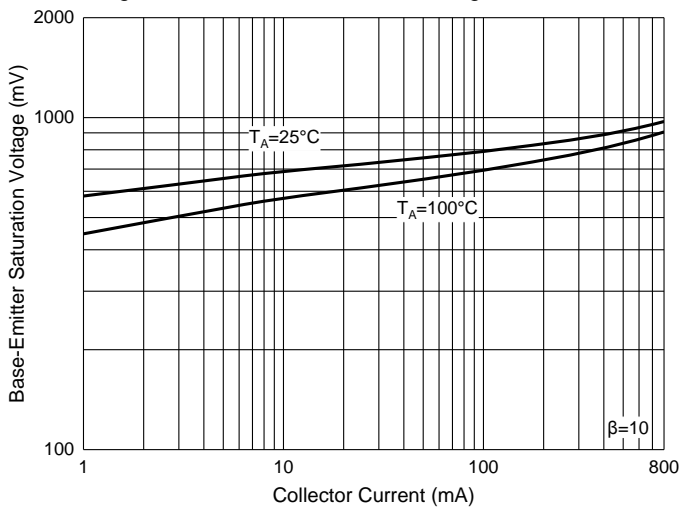


Fig. 4 - Collector-Emitter Saturation Voltage Characteristics

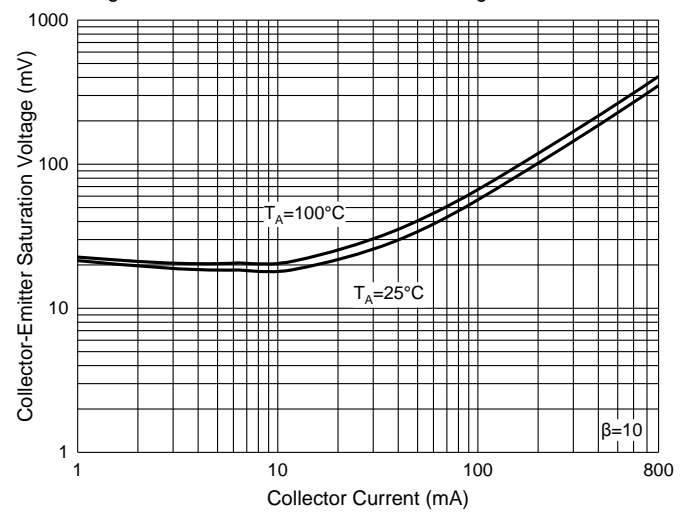


Fig. 5 - Transition frequency Characteristics

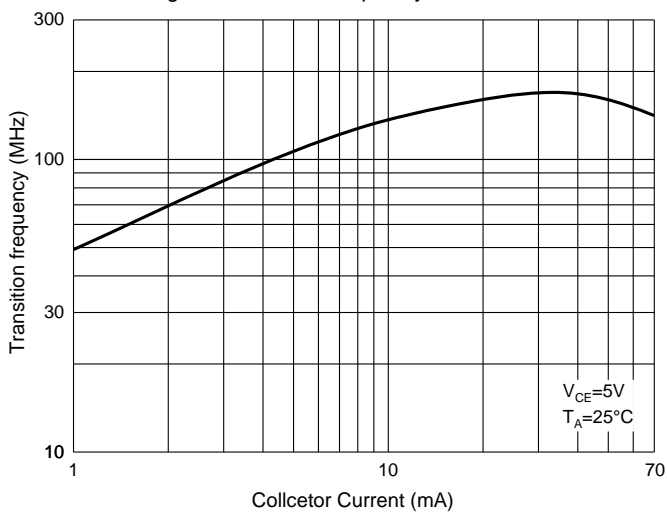


Fig. 6 - Collector Power Derating Curve

