



# FCI Semiconductor

## TO-92 Plastic-Encapsulate Transistors

**BC337,-16,-25,-40** TRANSISTOR (NPN)

**BC338, -16,-25,-40**

### FEATURES

Power dissipation

$P_{CM}$ : 0.625 W ( $T_{amb}=25^{\circ}C$ )

Collector current

$I_{CM}$ : 0.8 A

Collector-base voltage

$V_{CBO}$ : BC337 50 V  
BC338 30 V

Operating and storage junction temperature range

$T_J, T_{stg}$ :  $-55^{\circ}C$  to  $+150^{\circ}C$

### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{CBO}$	$I_C=100\mu A, I_E=0$				
BC337			50			V
BC338			30			V
Collector-emitter breakdown voltage		$I_C=10\text{ mA}, I_B=0$				
BC337	$V_{CEO}$		45			V
BC338			25			V
Emitter-base breakdown voltage	$V_{EBO}$	$I_E=10\mu A, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$					
BC337		$V_{CB}=45\text{ V}, I_E=0$			0.1	$\mu A$
BC338		$V_{CB}=25\text{ V}, I_E=0$			0.1	$\mu A$
Collector cut-off current						
BC337	$I_{CEO}$	$V_{CE}=40\text{ V}, I_B=0$			0.2	$\mu A$
BC338		$V_{CE}=20\text{ V}, I_B=0$			0.2	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4\text{ V}, I_C=0$			0.1	$\mu A$
DC current gain						
BC337/BC338	$h_{FE(1)}$	$V_{CE}=1\text{ V}, I_C=100\text{ mA}$	100		630	
BC337-16/BC338-16			100		250	
BC337-25/BC338-25			160		400	
BC337-40/BC338-40			250		630	
	$H_{FE(2)}$	$V_{CE}=1\text{ V}, I_C=300\text{ mA}$	60			
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	$f_T$	$V_{CE}=5\text{ V}, I_C=10\text{ mA}$ $f=100\text{ MHz}$	210			MHz

