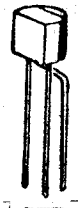
BC 337 · BC 338

NPN SILICON AF MEDIUM POWER TRANSISTORS

THE BC337, BC338 ARE NPN SILICON PLANAR EPITAXIAL TRANSISTORS FOR USE IN AF DRIVER AND OUTPUT STAGES, AS WELL AS FOR UNIVERSAL APPLICATIONS. THE BC337, BC338 ARE COMPLEMENTARY TO THE PNP TYPE BC327, BC328 RESPECTIVELY.

CASE TO-92F



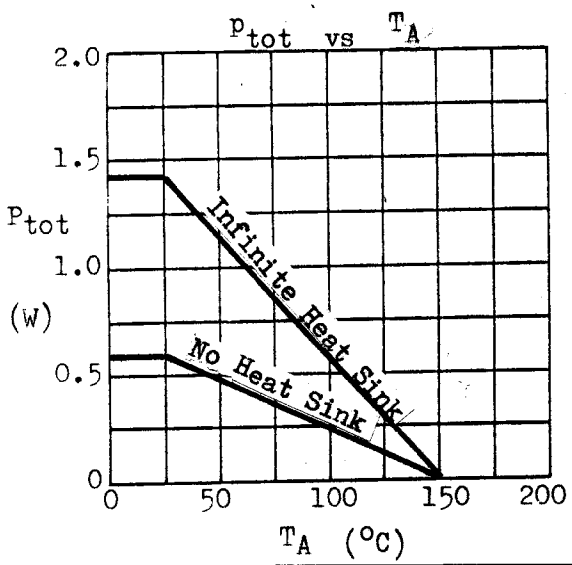
CEB

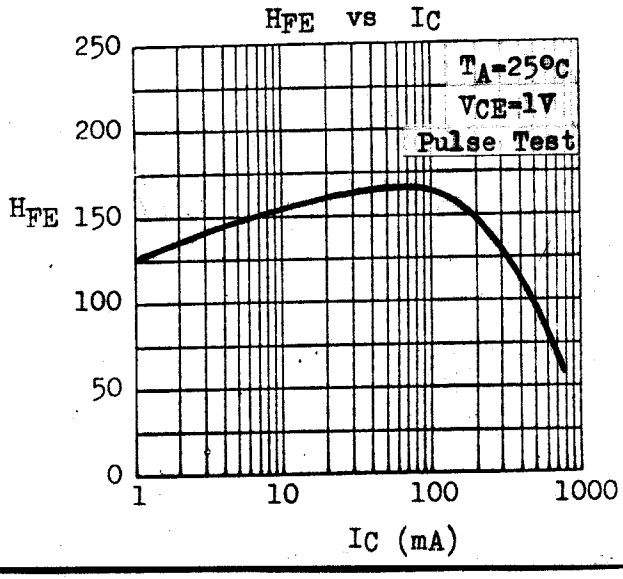
ABSOLUTE MAXIMUM RATINGS

		BC337	BC338
Collector-Emitter Voltage (V_{BE}=0)	V_{CES}	50V	30V
Collector-Emitter Voltage (I_B=0)	V_{CEO}	45V	25V
Emitter-Base Voltage	V_{EBO}	5V	
Collector Current	I_C	0.8A	
Collector Peak Current (t ≤ 10mS)	I_{CM}	1.5A	
Total Power Dissipation (@ $T_C \leq 25^oC$)	P_{tot}	1.4W	
(@ $T_A \leq 25^oC$)		625mW	
Operating Junction & Storage Temperature	T_j, T_{stg}	-55 to 150°C	

THERMAL RESISTANCE

Junction to Case	θ_{jc}	90°C/W	max.
Junction to Ambient	θ_{ja}	200°C/W	max.





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ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	BC337 MIN	BC337 TYP	BC337 MAX	BC338 MIN	BC338 TYP	BC338 MAX	UNIT	TEST CONDITIONS
Collector-Emitter Breakdown Voltage	BV_{CES}	50			30			V	I_C=0.1mA V_{BE}=0
Collector-Emitter Breakdown Voltage	LV_{CEO} *	45			25			V	I_C=10mA I_B=0
Emitter-Base Breakdown Voltage	BV_{EBO}	5			5			V	I_E=0.1mA I_C=0
Collector Cutoff Current	I_{CES}			100				nA	V_{CES}=45V
							100	nA	V_{CES}=25V
				10				μA	V_{CES}=45V T_A=125°C
							10	μA	V_{CES}=25V T_A=125°C
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$*			0.7			0.7	V	I_C=500mA I_B=50mA
Base-Emitter Voltage	V_{BE} *			1.2			1.2	V	I_C=300mA V_{CE}=1V
D.C. Current Gain	H_{FE} *	100		630	100		630		I_C=100mA V_{CE}=1V
Group 16 (A)		100		250	100		250		
Group 25 (B)		160		400	160		400		
Group 40 (C)		250		630	250		630		
All Groups		40			40				I_C=300mA V_{CE}=1V
H_{FE} Matched Pair Ratio	$\frac{H_{FE}\ 1}{H_{FE}\ 2}$ *			1.41			1.41		I_C=100mA V_{CE}=1V
Current Gain-Bandwidth Product	f_T		100			100		MHz	I_C=10mA V_{CE}=5V
Collector-Base Capacitance	Cob		10			10		pF	V_{CB}=10V I_E=0 f=1MHz

* Pulse Test : Pulse Width=0.3mS, Duty Cycle=1%