

BC 737 · BC 738

NPN SILICON AF MEDIUM POWER TRANSISTORS

THE BC737, BC738 ARE NPN SILICON PLANAR EPITAXIAL TRANSISTORS FOR USE IN AF DRIVER AND OUTPUT STAGES, AS WELL AS FOR UNIVERSAL APPLICATIONS. THE BC737, BC738 ARE COMPLEMENTARY TO THE PNP TYPE BC727, BC728 RESPECTIVELY.

CASE TO-92A

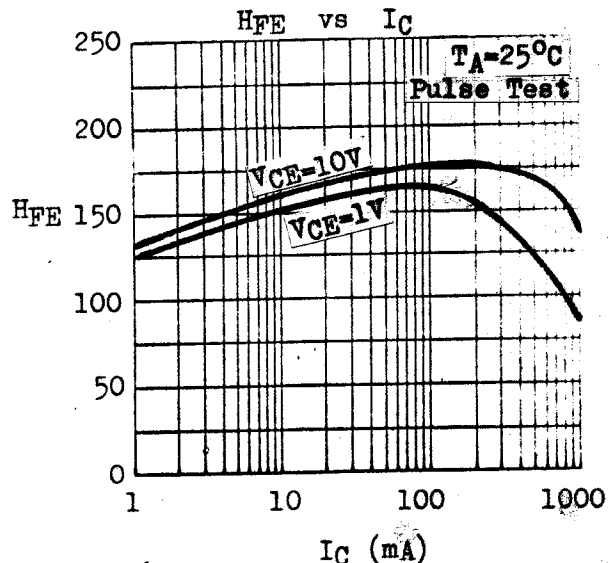
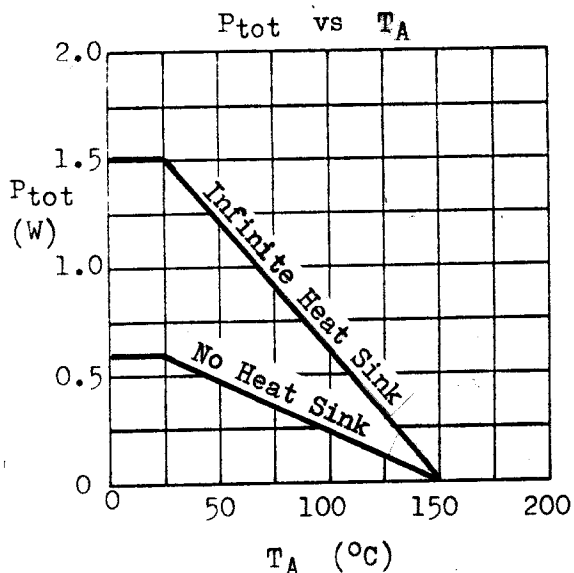


ABSOLUTE MAXIMUM RATINGS

	BC737	BC738
Collector-Base Voltage	50V	30V
Collector-Emitter Voltage	40V	25V
Emitter-Base Voltage	5V	
Collector Current	1.5A	
Collector Peak Current ($t \leq 10\text{ms}$)	2.5A	
Total Power Dissipation (@ $T_C \leq 25^\circ\text{C}$)	1.5W	
(@ $T_A \leq 25^\circ\text{C}$)	625mW	
Operating Junction & Storage Temperature	T_j, T_{stg} -55 to 150°C	

THERMAL RESISTANCE

Junction to Case	θ_{jc}	83°C/W max.
Junction to Ambient	θ_{ja}	200°C/W max.



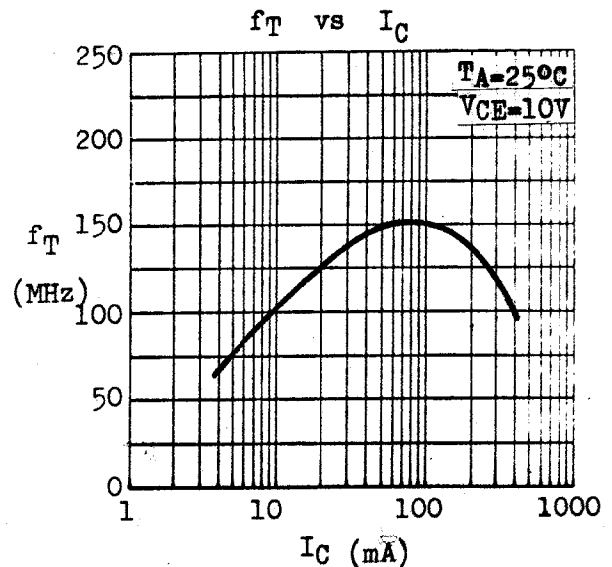
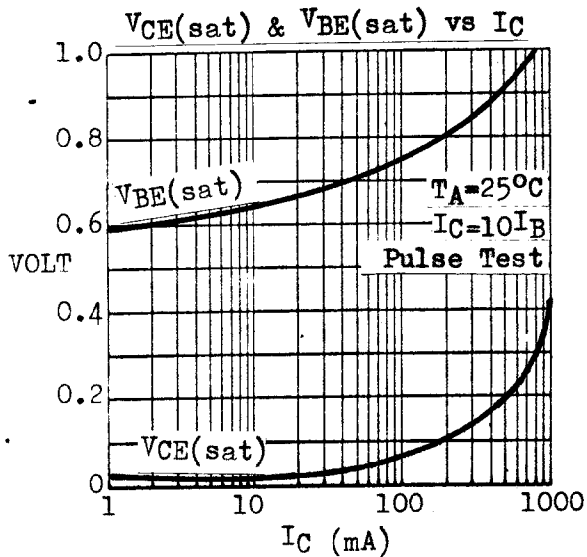
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ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

PARAMETER	SYMBOL	BC737		BC738		UNIT	TEST CONDITIONS	
		MIN	TYP MAX	MIN	TYP MAX			
Collector-Base Breakdown Voltage	BV_{CBO}	50		30		V	$I_C=0.1mA$ $I_E=0$	
Collector-Emitter Breakdown Voltage	$LV_{CEO} *$	40		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_{CBO}		100		100	nA	$V_{CB}=40V$ $I_E=0$	
Emitter Cutoff Current	I_{EBO}		100		100	nA	$V_{EB}=4V$ $I_C=0$	
Collector-Emitter Saturation Voltage	$V_{CE(sat)} *$		0.7		0.7	V	$I_C=500mA$ $I_B=50mA$	
Base-Emitter Saturation Voltage	$V_{BE(sat)} *$		1.2		1.2	V	$I_C=500mA$ $I_B=50mA$	
			1.3		1.3	V	$I_C=1A$ $I_B=0.1A$	
D.C. Current Gain	$H_{FE} *$	63	630	63	630		$I_C=100mA$ $V_{CE}=1V$	
		Group 10	63	160	63	160		
		Group 16	100	250	100	250		
		Group 25	160	400	160	400		
		Group 40	250	630	250	630		
All Groups	$H_{FE} *$	63		63			$I_C=500mA$ $V_{CE}=1V$	
		15		30			$I_C=1A$ $V_{CE}=1V$	
Current Gain-Bandwidth Product	f_T	40	150	40	150	MHz	$I_C=50mA$ $V_{CE}=10V$	
Collector-Base Capacitance	C_{ob}		12 20		12 20	pF	$V_{CB}=10V$ $I_E=0$ $f=1MHz$	

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





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