

# 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

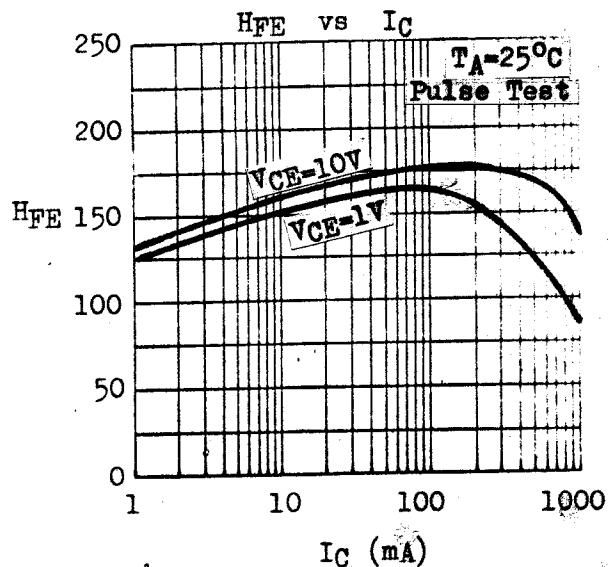
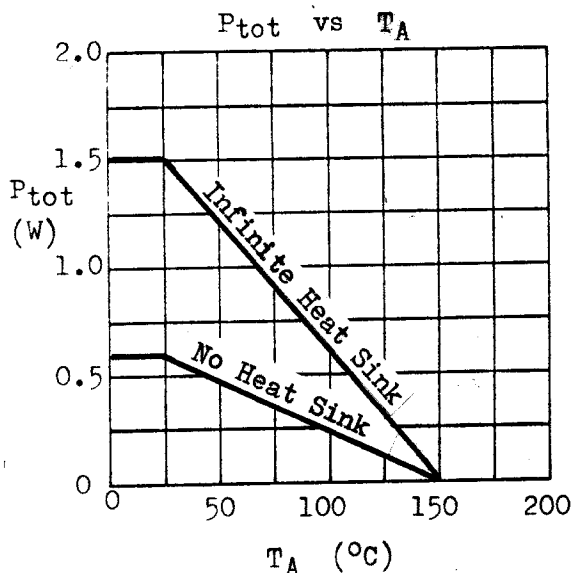


## ABSOLUTE MAXIMUM RATINGS

	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 (@ $T_C \leq 25^\circ\text{C}$ ) (@ $T_A \leq 25^\circ\text{C}$ )	1.5W	625mW
Operating Junction & Storage Temperature	-55 to 150°C	

## THERMAL RESISTANCE

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



**MICRO ELECTRONICS LTD.**

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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%

