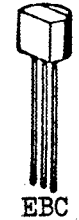


BC 537 · BC 538

NPN SILICON AF MEDIUM POWER TRANSISTORS

THE BC537, BC538 ARE NPN SILICON PLANAR EPITAXIAL TRANSISTORS FOR USE IN AF DRIVER AND OUTPUT STAGES, AS WELL AS FOR UNIVERSAL APPLICATIONS. THE BC537, BC538 ARE COMPLEMENTARY TO THE PNP TYPE BC527, BC528 RESPECTIVELY.

CASE TO-92A



ABSOLUTE MAXIMUM RATINGS

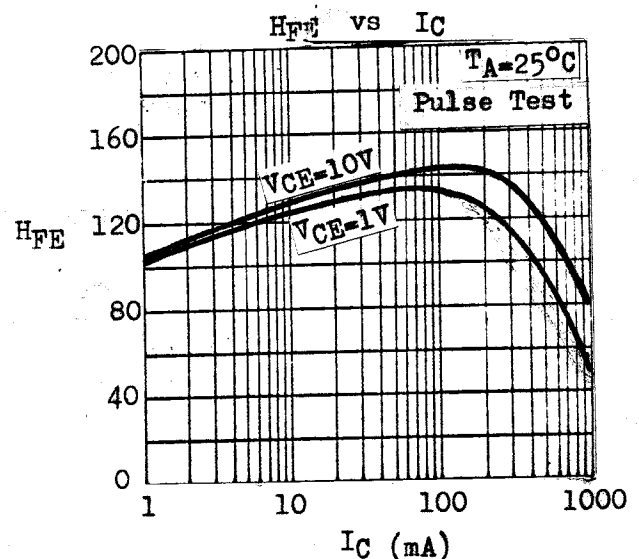
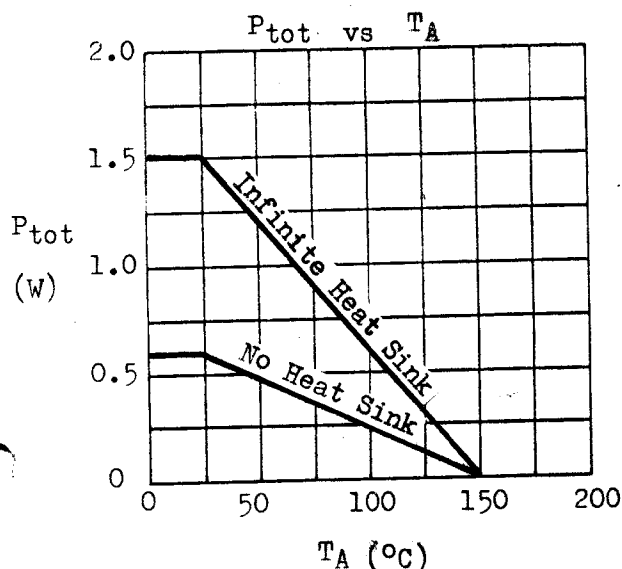
Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Collector Current
Collector Peak Current ($t \leq 10\text{ms}$)
Total Power Dissipation (@ $T_C \leq 25^\circ\text{C}$)
(@ $T_A \leq 25^\circ\text{C}$)
Operating Junction & Storage Temperature

	BC537	BC538
V_{CB0}	60V	80V
V_{CE0}	60V	80V
V_{EB0}	6V	
I_C	1A	
I_{CM}	1.5A	
P_{tot}	1.5W	
	625mW	
T_j, T_{stg}	-55 to 150°C	

THERMAL RESISTANCE

Junction to Case
Junction to Ambient

θ_{jc}	83°C/W max.
θ_{ja}	200°C/W max.



MICRO ELECTRONICS LTD.

38 HUNG TO ROAD, KWUN TONG, HONG KONG. TELEX 43510
KWUN TONG P. O. BOX 69477 CABLE ADDRESS "MICROTRON"
TELEPHONE:- 3-430181-6 3-893363, 3-892423
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ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	BC537		BC538		UNIT	TEST CONDITIONS
		MIN	MAX	MIN	MAX		
Collector-Base Breakdown Voltage	BV_{CBO}	60		80		V	$I_C=0.1\text{mA}$ $I_E=0$
Collector-Emitter Breakdown Voltage	$LV_{CEO} *$	60		80		V	$I_C=10\text{mA}$ $I_B=0$
Emitter-Base Breakdown Voltage	BV_{EBO}	6		6		V	$I_E=0.01\text{mA}$ $I_C=0$
Collector Cutoff Current	I_{CBO}		100		100	nA	$V_{CB}=40\text{V}$ $I_E=0$
						nA	$V_{CB}=60\text{V}$ $I_E=0$
Emitter Cutoff Current	I_{EBO}		100		100	nA	$V_{EB}=4\text{V}$ $I_C=0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)} *$		0.7		0.7	V	$I_C=500\text{mA}$ $I_B=50\text{mA}$
						V	$I_C=1\text{A}$ $I_B=0.1\text{A}$
Base-Emitter Saturation Voltage	$V_{BE(sat)} *$		1.3		1.3	V	$I_C=150\text{mA}$ $I_B=15\text{mA}$
D.C. Current Gain	$H_{FE} *$	40	400	40	400		$I_C=100\text{mA}$ $V_{CE}=1\text{V}$
		40	100	40	100		
		63	160	63	160		
		100	250	100	250		
		160	400	160	400		
	All Groups						
	$H_{FE} *$	50		50			$I_C=10\text{mA}$ $V_{CE}=10\text{V}$
		50		50			$I_C=150\text{mA}$ $V_{CE}=10\text{V}$
		50		50			$I_C=500\text{mA}$ $V_{CE}=10\text{V}$
		15		15			$I_C=1\text{A}$ $V_{CE}=10\text{V}$
Current Gain-Bandwidth Product	f_T	100		100		MHz	$I_C=50\text{mA}$ $V_{CE}=10\text{V}$
Collector-Base Capacitance	C_{ob}		15		15	pF	$V_{CB}=10\text{V}$ $I_E=0$ $f=1\text{MHz}$

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

