



BF 297 · BF 298 · BF 299

NPN HIGH VOLTAGE VIDEO AMPLIFIERS

MICRO ELECTRONICS

THE BF297, BF298, BF299 ARE NPN SILICON PLANAR TRANSISTORS DESIGNED FOR HIGH VOLTAGE VIDEO AMPLIFIERS IN TELEVISION RECEIVERS. THEY FEATURE GOOD FREQUENCY CHARACTERISTICS.

CASE TO-92F



CEB

ABSOLUTE MAXIMUM RATINGS

		BF297	BF298	BF299
Collector-Base Voltage	V_{CBO}	160V	250V	300V
Collector-Emitter Voltage	V_{CEO}	160V	250V	300V
Emitter-Base Voltage	V_{EBO}		5V	
Collector Current	I_C		100mA	
Total Power Dissipation @ $T_C \leq 25^\circ\text{C}$	P_{tot}		1.5W	
@ $T_A \leq 25^\circ\text{C}$			625mW	
Operating Junction & Storage Temperature	T_j & T_{stg}		-55 to 150°C	

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

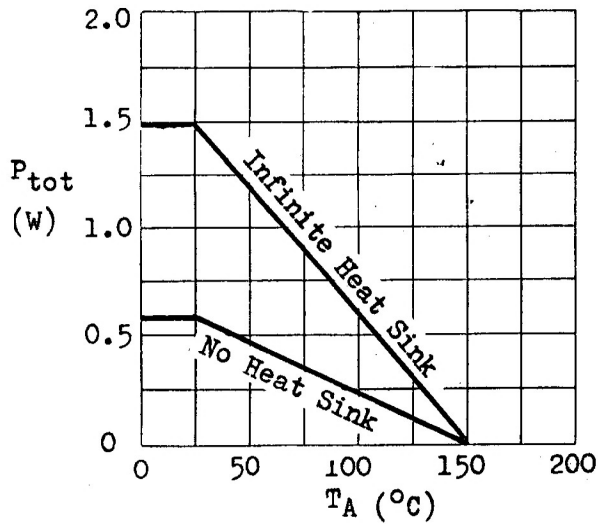
PARAMETER	SYMBOL	BF297 MIN MAX	BF298 MIN MAX	BF299 MIN MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	BV_{CBO}	160	250	300	V	$I_C = 0.1\text{mA}$ $I_E = 0$
Collector-Emitter Breakdown Voltage	LV_{CEO}	160	250	300	V	$I_C = 10\text{mA}$ $I_B = 0$
Emitter-Base Voltage	BV_{EBO}	5	5	5	V	$I_E = 0.1\text{mA}$ $I_C = 0$
Collector Cutoff Current	I_{CBO}	50			nA	$V_{CB} = 100\text{V}$ $I_E = 0$
			50		nA	$V_{CB} = 200\text{V}$ $I_E = 0$
				50	nA	$V_{CB} = 250\text{V}$ $I_E = 0$
Emitter Cutoff Current	I_{EBO}	50	50	50	nA	$V_{EB} = 3\text{V}$ $I_C = 0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	1	1	1	V	$I_C = 30\text{mA}$ $I_B = 3\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	0.85	0.85	0.85	V	$I_C = 30\text{mA}$ $I_B = 3\text{mA}$
D.C. Current Gain	H_{FE}	10	10	10		$I_C = 5\text{mA}$ $V_{CE} = 10\text{V}$
		30 150	30 150	30 150		$I_C = 30\text{mA}$ $V_{CE} = 10\text{V}$
		10	10	10		$I_C = 100\text{mA}$ $V_{CE} = 10\text{V}$
Current Gain-Bandwidth Product	f_T	50	50	50	MHz	$I_C = 30\text{mA}$ $V_{CE} = 10\text{V}$
Collector-Base Capacitance	C_{ob}	5	5	5	pF	$V_{CB} = 30\text{V}$ $I_E = 0$ $f = 1\text{MHz}$

MICRO ELECTRONICS LTD.

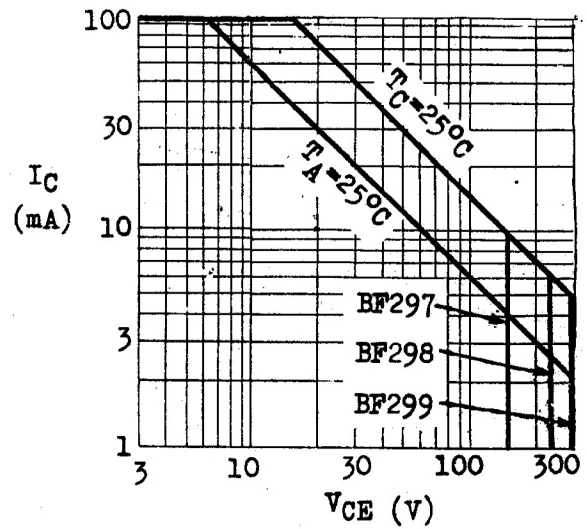
38 HUNG TO ROAD, KWUN TONG, HONG KONG. TELEX 43510
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 TELEPHONE:- 3-430181-6 3-893363, 3-892423
 FAX: 3-418321

TYPICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

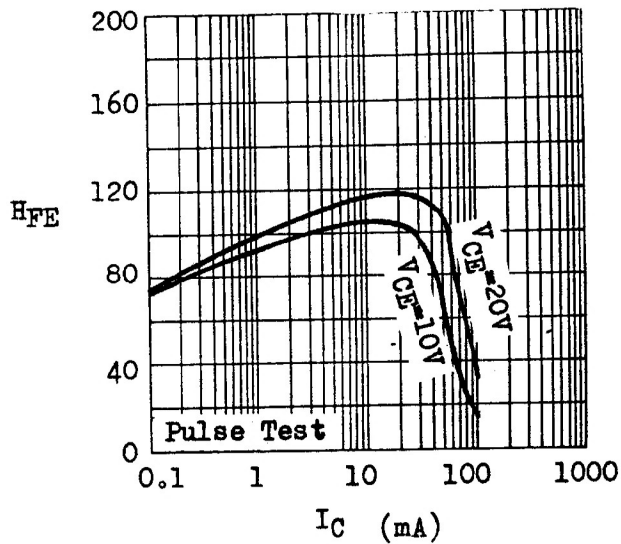
P_{tot} vs T_A



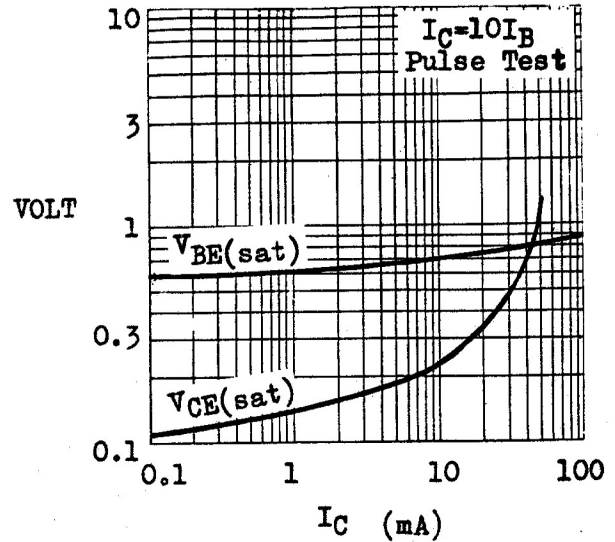
SAFE OPERATING AREA (D.C.)



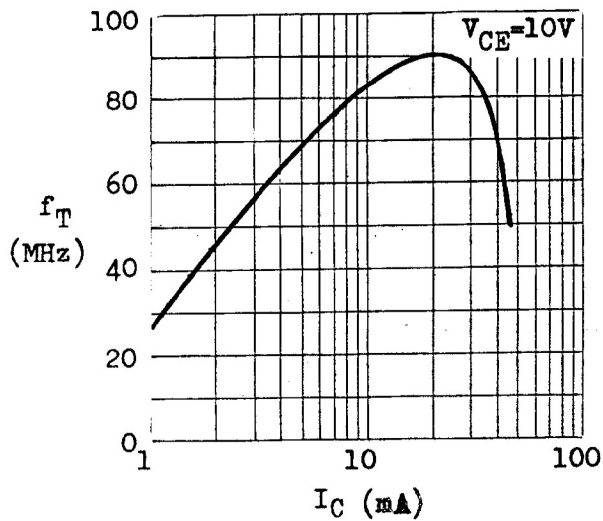
H_{FE} vs I_C



$V_{BE}(\text{sat})$ & $V_{CE}(\text{sat})$ vs I_C



f_T vs I_C



C_{ib} & C_{ob} vs V_R

