

MPS6651

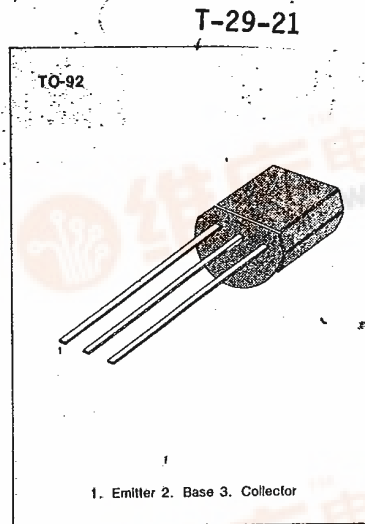
PNP EPITAXIAL SILICON TRANSISTOR

AMPLIFIER TRANSISTOR

- Collector-Emitter Voltage: $V_{CE0} = 25V$
- Collector Dissipation: $P_c (max) = 625mW$

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ C$)

Characteristic	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CE0}	25	V
Collector-Base Voltage	V_{CBO}	25	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current	I_c	1	A
Collector Dissipation	P_c	625	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 - 150	$^\circ C$



ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage	BV_{CE0}	$I_c = 1mA, I_B = 0$	25			V
Collector-Base Breakdown Voltage	BV_{CBO}	$I_c = 100\mu A, I_E = 0$	25			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = 10\mu A, I_C = 0$	4			V
Collector Cut-off Current	I_{CBO}	$V_{CB} = 25V, I_E = 0$			100	nA
Collector Cut-off Current	I_{CEO}	$V_{CE} = 25V, I_B = 0$			100	nA
DC Current Gain	h_{FE}	$I_c = 100mA, V_{CE} = 1V$ $I_c = 500mA, V_{CE} = 1V$ $I_c = 1A, V_{CE} = 1V$	50 50 30			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_c = 1A, I_B = 100mA$			0.6	V
Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0$ $f = 100KHz$			30	pF
Base-Emitter On Voltage	$V_{BE(on)}$	$I_c = 500mA, V_{CE} = 1V$			1.2	V
Current Gain Bandwidth Product	f_T	$I_c = 50mA, V_{CE} = 10V$ $f = 30MHz$	100			MHz
Turn On Time	t_{on}	$V_{CC} = 40V, I_c = 500mA$ $I_{B1} = 50mA$			55	ns
Turn Off Time	t_{off}	$V_{CC} = 40V, I_c = 500mA$ $I_{B1} = 50mA$			300	ns

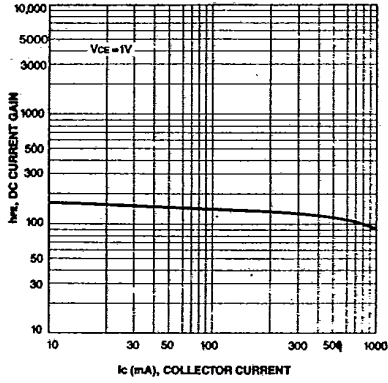


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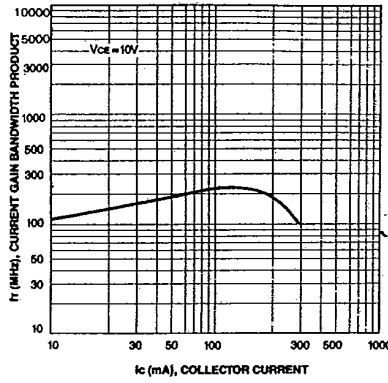
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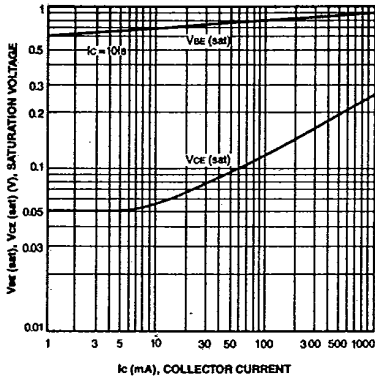
DC CURRENT GAIN



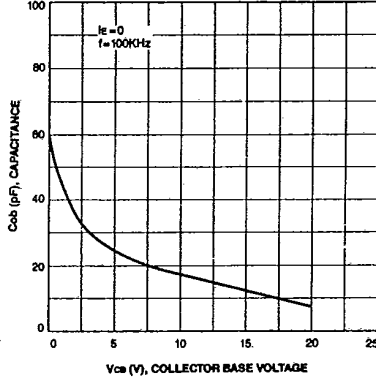
CURRENT GAIN BANDWIDTH PRODUCT



COLLECTOR-EMITTER SATURATION VOLTAGE
BASE-EMITTER SATURATION VOLTAGE



OUTPUT CAPACITANCE



3