

MPS8098**NPN EPITAXIAL SILICON TRANSISTOR**

T-29-21

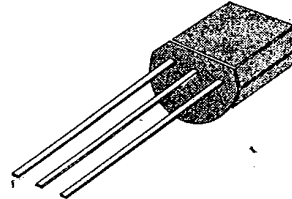
AMPLIFIER TRANSISTOR

- Collector-Emitter Voltage: $V_{CE0} = 60V$
- Collector Dissipation: $P_C (\text{max}) = 625mW$

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	500	mA
Collector Dissipation	P_C	625	mW
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{stg}	-55 ~ 150	$^\circ C$

TO-92



1. Emitter 2. Base 3. Collector

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

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = 100\mu A, I_E = 0$	60			V
*Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = 10mA, I_B = 0$	60			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = 10\mu A, I_C = 0$	6			V
Collector Cut-off Current	I_{CEO}	$V_{CE} = 60V, I_B = 0$			100	nA
Collector Cut-off Current	I_{CBO}	$V_{CB} = 60V, I_E = 0$			100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 6V, I_C = 0$			100	nA
*DC Current Gain	h_{FE}	$I_C = 1mA, V_{CE} = 5V$	100		300	
		$I_C = 10mA, V_{CE} = 5V$	100			
		$I_C = 100mA, V_{CE} = 5V$	75			
*Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 100mA, I_B = 5mA$			0.4	V
		$I_C = 100mA, I_B = 10mA$			0.3	V
Output Capacitance	C_{ob}	$V_{CB} = 5V, I_E = 0$			6	pF
Current Gain Bandwidth Product	f_T	$f = 1MHz$ $I_C = 10mA, V_{CE} = 5V$	150			MHz
*Base-Emitter On Voltage	$V_{BE(on)}$	$f = 100MHz$ $I_C = 1mA, V_{CE} = 5V$	0.5		0.7	V

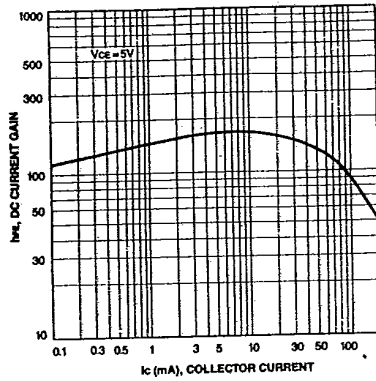
* Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$ 

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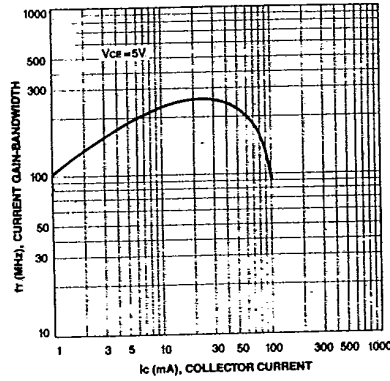
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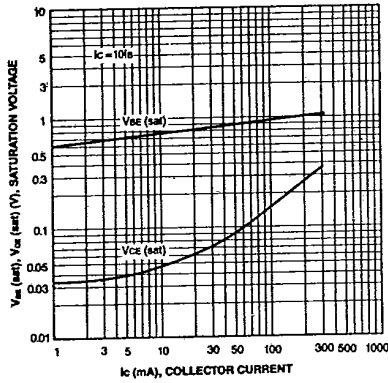
DC CURRENT GAIN



CURRENT GAIN-BANDWIDTH PRODUCT



COLLECTOR-EMITTER SATURATION VOLTAGE
BASE-EMITTER SATURATION VOLTAGE



OUTPUT CAPACITANCE

