

Transistors

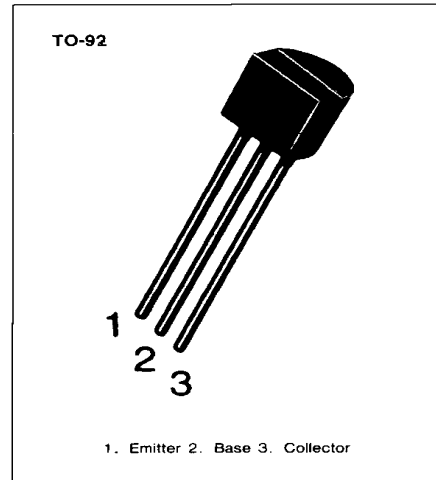
USP8098

AMPLIFIER TRANSISTOR

- Collector Dissipation: P_C (max)=625mW

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

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	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~150	$^\circ\text{C}$

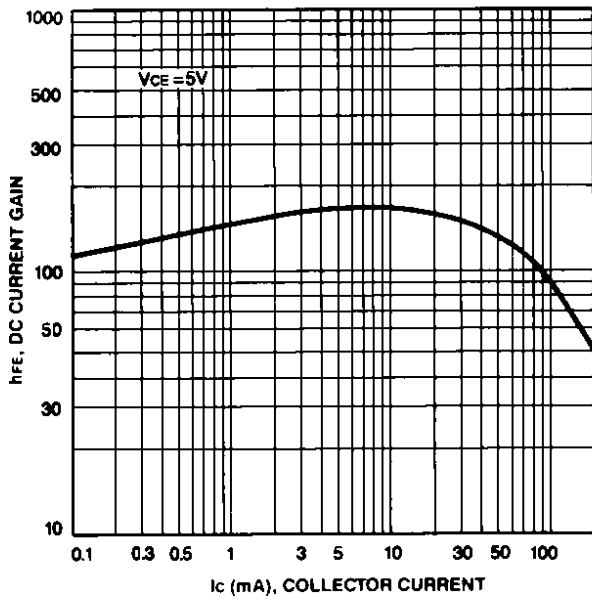


ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

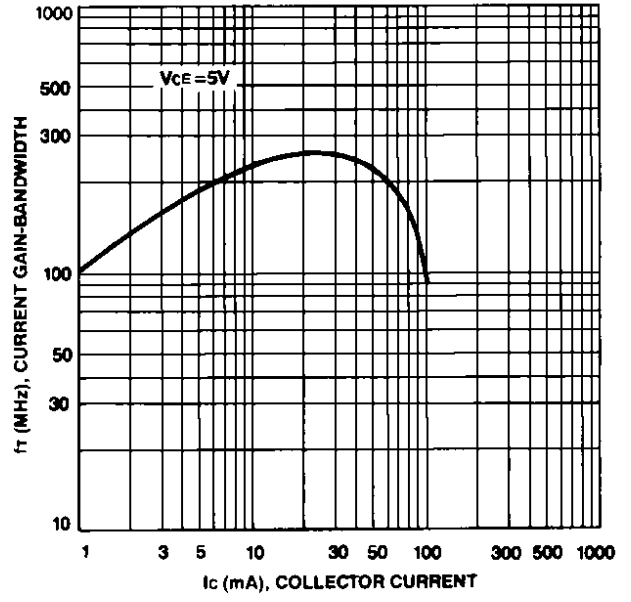
Characteristic	Symbol	Test Conditions	Min	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=100\mu\text{A}, I_E=0$	60		V
*Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=10\text{mA}, I_B=0$	60		V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=10\mu\text{A}, I_C=0$	6		V
Collector Cut-off Current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

*Pulse Test: $PW=300\mu\text{s}$, Duty Cycle=2%

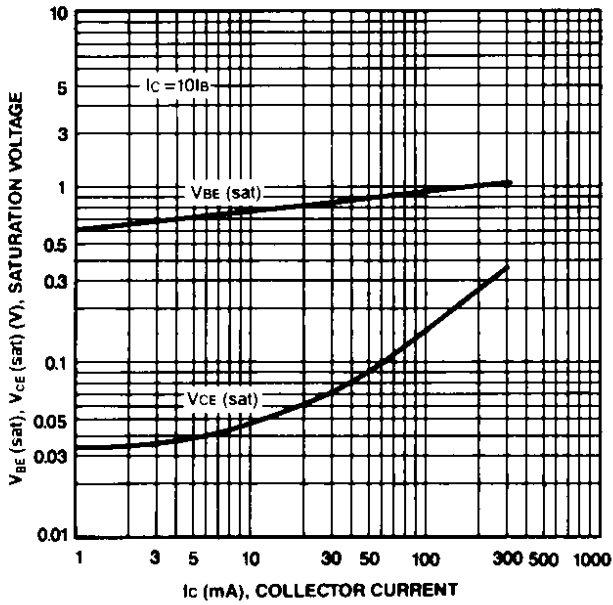
DC CURRENT GAIN



CURRENT GAIN-BANDWIDTH PRODUCT



**COLLECTOR-EMITTER SATURATION VOLTAGE
BASE-EMITTER SATURATION VOLTAGE**



OUTPUT CAPACITANCE

