

Transistors

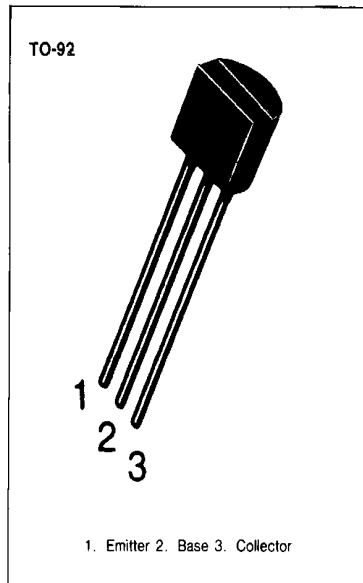
USP2907

GENERAL PURPOSE TRANSISITOR

- Collector-Emitter Voltage : $V_{CE0} = 40V$
- 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}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-600	mA
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-Base Breakdown Voltage	BV_{CBO}	$I_C = -10\mu A, I_E = 0$	-60			V
*Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = -10mA, I_B = 0$	-40			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = -10\mu A, I_C = 0$	-5			V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -50V, I_E = 0$			-20	nA
DC Current Gain	h_{FE}	$I_C = -0.1mA, V_{CE} = -10V$	35			
		$I_C = -1mA, V_{CE} = -10V$	50			
		$I_C = -10mA, V_{CE} = -10V$	75			
		* $I_C = -150mA, V_{CE} = -10V$	100		300	
		* $I_C = -500mA, V_{CE} = -10V$	30			
*Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -150mA, I_B = -15mA$			-0.4	V
		$I_C = -500mA, I_B = -50mA$			-1.6	V
*Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -150mA, I_B = -15mA$			-1.3	V
		$I_C = -500mA, I_B = -50mA$			-2.6	V
Output Capacitance	C_{oB}	$V_{CB} = -10V, I_E = 0$ $f = 1MHz$			8	pF
*Current Gain Bandwidth Product	f_T	$I_C = -50mA, V_{CE} = -20V$ $f = 100MHz$	200			MHz
Turn On Time	t_{on}	$V_{CC} = -30V, I_C = -150mA$ $I_{B1} = -15mA$			45	ns
Turn Off Time	t_{off}	$V_{CC} = -6V, I_C = -150mA$ $I_{B1} = I_{B2} = -15mA$			100	ns

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

Also available as a PN2907

