

MPS2907**PNP EPITAXIAL SILICON TRANSISTOR**

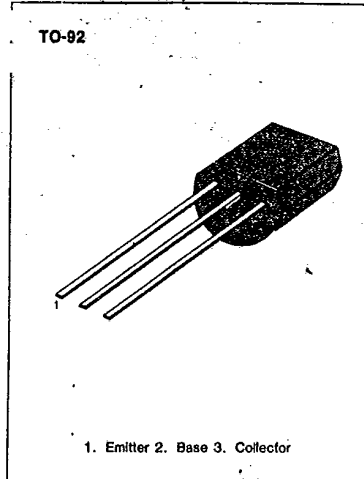
T-29-21

GENERAL PURPOSE TRANSISTOR

- Collector-Emitter Voltage: $V_{CE0} = 40V$
- Collector Dissipation: $P_c (\text{max}) = 625\text{mW}$

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	60	V
Collector-Emitter Voltage	V_{CE0}	40	V
Emitter-Base Voltage	V_{EB0}	5	V
Collector Current	I_c	600	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	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CB0}	$I_c = 10\mu\text{A}, I_E = 0$	60			V
*Collector-Emitter Breakdown Voltage	BV_{CE0}	$I_c = 10\text{mA}, I_B = 0$	40			V
Emitter-Base Breakdown Voltage	BV_{EB0}	$I_E = 10\mu\text{A}, I_C = 0$	5			V
Collector Cut-off Current	I_{CBO}	$V_{CB} = 50V, I_E = 0$			20	nA
DC Current Gain	h_{FE}	$I_c = 0.1\text{mA}, V_{CE} = 10V$	35			
		$I_c = 1\text{mA}, V_{CE} = 10V$	50			
		$I_c = 10\text{mA}, V_{CE} = 10V$	75			
		* $I_c = 150\text{mA}, V_{CE} = 10V$	100		300	
		* $I_c = 500\text{mA}, V_{CE} = 10V$	30			
*Collector-Emitter Saturation Voltage	$V_{CE} (\text{sat})$	$I_c = 150\text{mA}, I_B = 15\text{mA}$			0.4	V
		$I_c = 500\text{mA}, I_B = 50\text{mA}$			1.8	V
*Base-Emitter Saturation Voltage	$V_{BE} (\text{sat})$	$I_c = 150\text{mA}, I_B = 15\text{mA}$			1.3	V
		$I_c = 500\text{mA}, I_B = 50\text{mA}$			2.6	V
Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0$ $f = 1\text{MHz}$			8	pF
*Current Gain Bandwidth Product	f_T	$I_c = 50\text{mA}, V_{CE} = 20V$ $f = 100\text{MHz}$	200			MHz
Turn On Time	t_{on}	$V_{CC} = 30V, I_c = 150\text{mA}$ $I_{B1} = 15\text{mA}$			45	ns
Turn Off Time	t_{off}	$V_{CC} = 6V, I_c = 150\text{mA}$ $I_{B1} = I_{B2} = 15\text{mA}$			100	ns

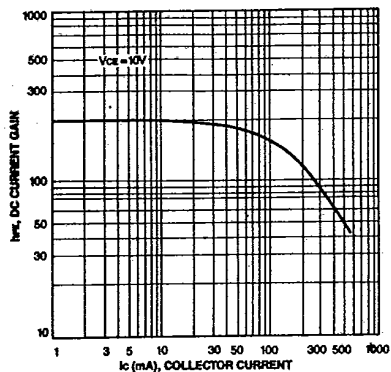
* Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$
Also available as a PN2907

MPS2907

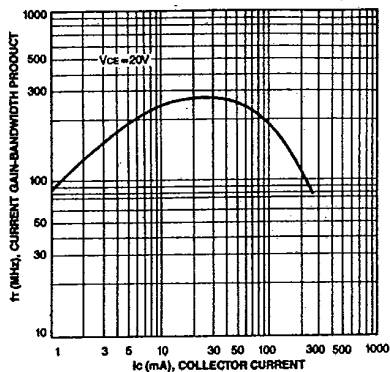
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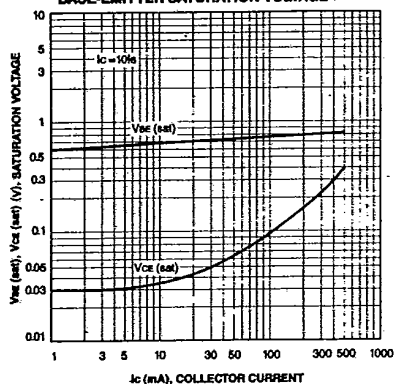
DC CURRENT GAIN



CURRENT GAIN-BANDWIDTH PRODUCT



COLLECTOR-EMITTER SATURATION VOLTAGE
BASE-EMITTER SATURATION VOLTAGE



OUTPUT CAPACITANCE

