

KSP2222

NPN EPITAXIAL SILICON TRANSISTOR

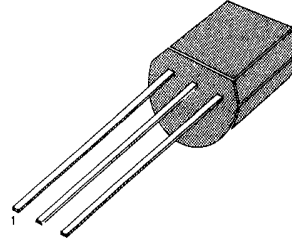
GENERAL PURPOSE TRANSISTOR

- Collector-Emitter Voltage: $V_{CE0} = 30V$
- Collector Dissipation: $P_C (max) = 625mW$

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	30	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	$^\circ C$

TO-92



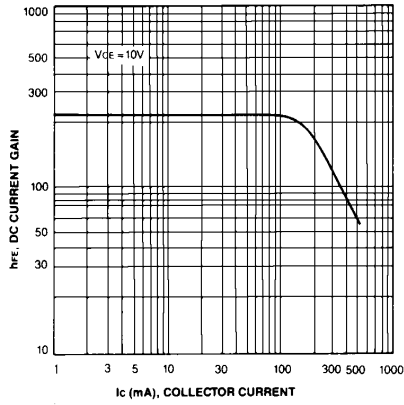
1. Emitter 2. Base 3. Collector

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

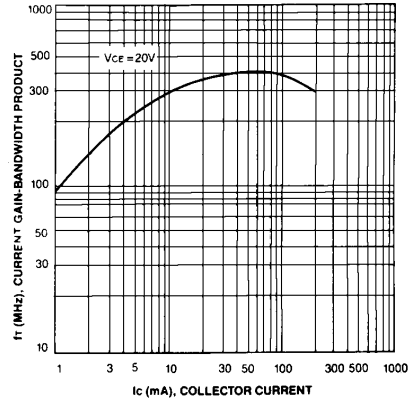
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = 10\mu A, I_E = 0$	60			V
Collector Emitter Breakdown Voltage	BV_{CEO}	$I_C = 10mA, I_B = 0$	30			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = 10\mu A, I_C = 0$	5			V
Collector Cut-off Current	I_{CBO}	$V_{CB} = 50V, I_E = 0$			10	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
*Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 500mA, I_B = 50mA$			1.6	V
		$I_C = 150mA, I_B = 15mA$			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	$I_C = 20mA, V_{CE} = 20V$ $f = 100MHz$	250			MHz
Turn On Time	t_{ON}	$V_{CC} = 30V, V_{BE} = 0.5V$ $I_C = 150mA, I_{B1} = 15mA$			35	ns
Turn Off Time	t_{OFF}	$V_{CC} = 30V, I_C = 150mA$ $I_{B1} = I_{B2} = 15mA$			285	ns

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

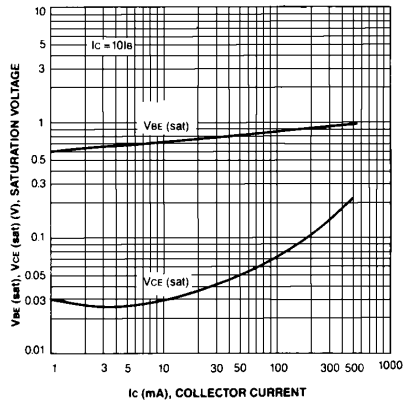
DC CURRENT GAIN



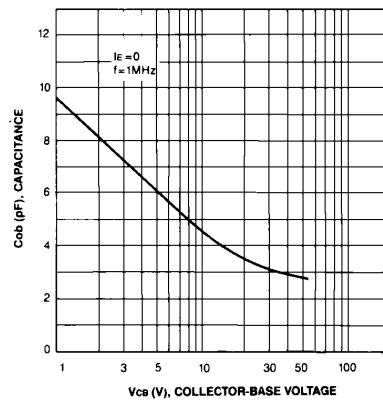
CURRENT GAIN-BANDWIDTH PRODUCT



COLLECTOR-EMITTER SATURATION VOLTAGE
BASE-EMITTER SATURATION VOLTAGE



OUTPUT CAPACITANCE



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