

Transistors

2SD5041

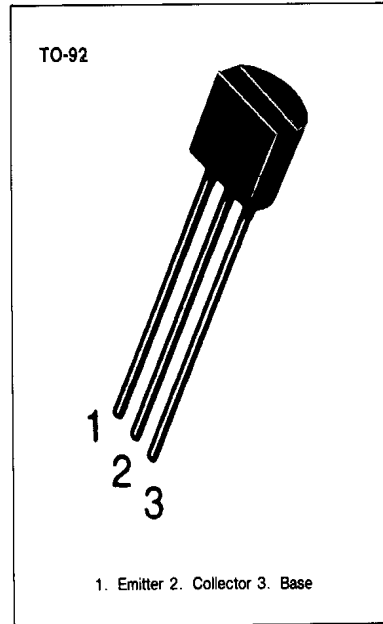


AF OUTPUT AMPLIFIER FOR ELECTRONIC FLASH UNIT

- Low $V_{ce(sat)}$
- High Performance at Low Supply Voltage

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current	I_C	5	A
Collector Dissipation	P_C	0.75	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55~150	$^\circ\text{C}$



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

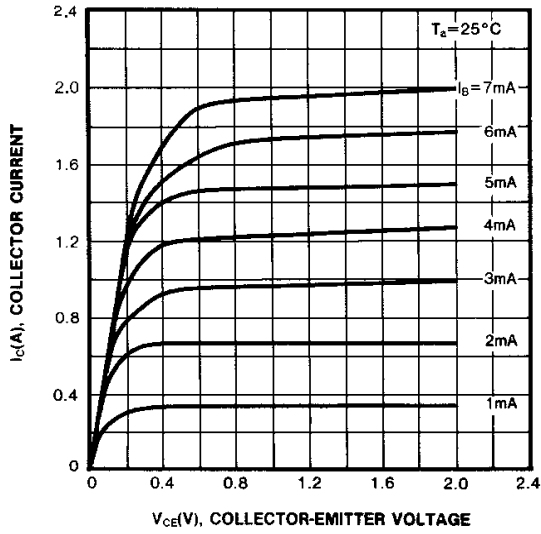
Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Emitter Voltage	BV_{CEO}	$I_C = 1\text{mA}, I_B = 0$	20			V
Emitter Base Voltage	BV_{EBO}	$I_C = 10\mu\text{A}, I_E = 0$	7			V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 10\text{V}, I_E = 0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 7\text{V}, I_C = 0$			0.1	μA
DC Current Gain	h_{FE1}	$V_{CE} = 2\text{V}, I_C = 0.5\text{A}$	180		600	
	h_{FE2}	$V_{CE} = 2\text{V}, I_C = 2\text{A}$	150			
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 3\text{A}, I_B = 0.1\text{A}$			1	V
Current Gain Bandwidth Product	f_T	$V_{CE} = 6\text{V}, I_C = 50\text{mA}$		150		MHz
Output Capacitance	C_{ob}	$V_{CB} = 20\text{V}, I_E = 0, f = 1\text{MHz}$			50	pF

h_{FE1} CLASSIFICATION

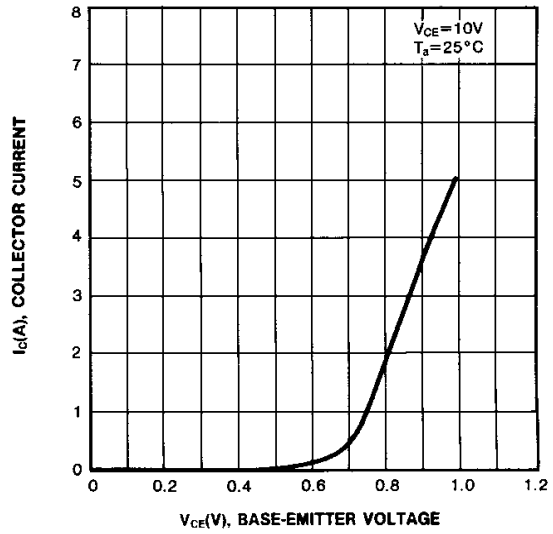
Classification	P	Q	R
h_{FE1}	180-270	230-380	340-600



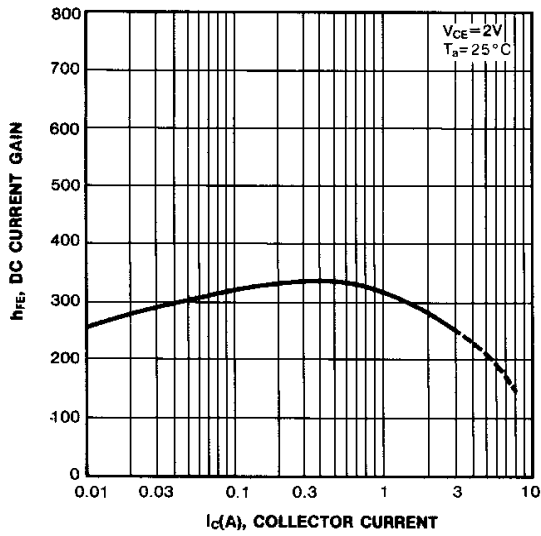
STATIC CHARACTERISTIC



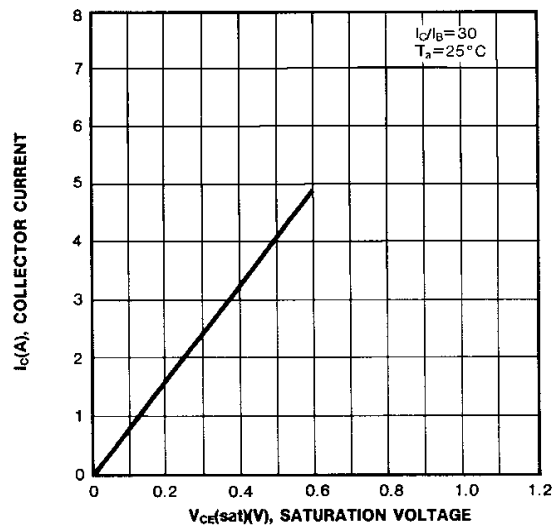
BASE-EMITTER SATURATION VOLTAGE



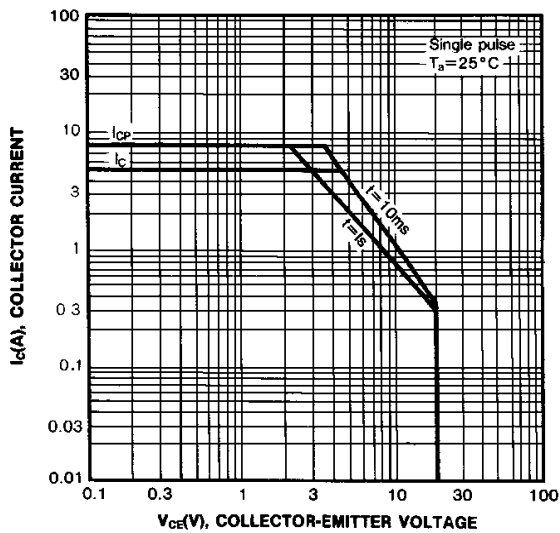
DC CURRENT GAIN



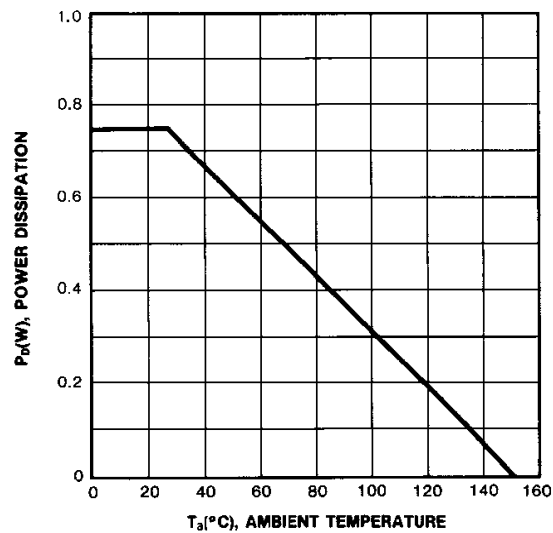
COLLECTOR-EMITTER SATURATION VOLTAGE



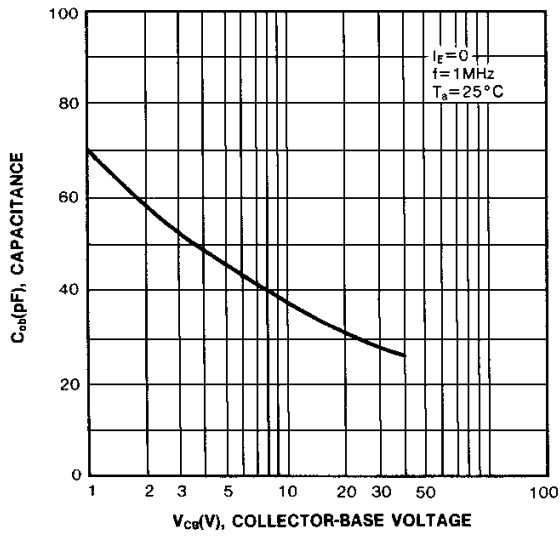
SAFE OPERATING AREA



POWER DERATING



OUTPUT CAPACITANCE



CURRENT GAIN BANDWIDTH PRODUCT

