Silicon NPN Transistor

BU406

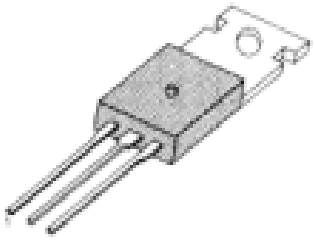
DATASHEET

High Voltage Power Applications

Technical Data (Short Form):

Ucb	-	400V
Uce	-	200V
Ic	-	7A
N	-	60W
F	-	10Mhz
hFE	-	-

Case: TO-220



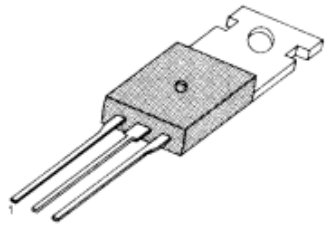
1. Base 2. Collector 3. Emitter

OEM: Samsung

Source: Samsung CD 1995

HIGH VOLTAGE SWITCHING USE IN HORIZONTAL DEFLECTION OUTPUT STAGE

TO-220



1. Base 2. Collector 3. Emitter

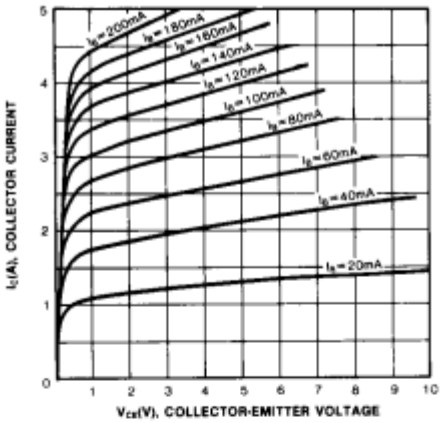
ABSOLUTE MAXIMUM RATINGS (T_a = 25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	400	V
Collector-Emitter Voltage	V_{CEO}	200	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	7	A
Collector Peck Current	I_{CM}	10	A
Base Current	I_B	4	A
Qcllector Dissipation	P_C	60	W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	−65∼150	°C

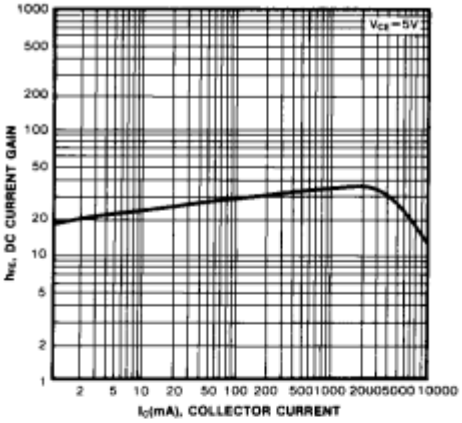
ELECTRICAL CHARACTERISTICS (T_a = 25°C)

Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector Cutoff Current (V_{BE}=0)	I_{CES}	V_{CE}=400V, V_{BE}=0		5	mA
		V_{CE}=250V, V_{BE}=0		100	μA
		V_{CE}=250V, V_{BE}=0, T_C=150°C		1	mA
Emitter Cutoff Current (I_C=0)	I_{EBO}	V_{BE}=6V, I_C=0		1	mA
Collector Emitter Saturation Voltage					
: BU406	V_{CE}(sat)	I_C=5A, I_B=0.5A		1	V
: BU406H		I_C=5A, I_B=0.8A		1	V
: BU408		I_C=6A, I_B=1.2A		1	V
Base Emitter Saturation Voltage					
: BU406	V_{BE}(sat)	I_C=5A, I_B=0.5A		1.2	V
: BU406H		I_C=5A, I_B=0.8A		1.2	V
: BU408		I_C=6A, I_B=1.2A		1.5	V
Current Gain-Bandwidth Product	f_T	V_{CE}=10V, I_C=0.5A	10		MHz
Turn-Off Time : BU406	t_{off}	I_C=5A, I_B=0.5A		0.75	μS
: BU406H		I_C=5A, I_B=0.8A		0.4	μS
: BU408		I_C=6A, I_B=1.2A		0.4	μS

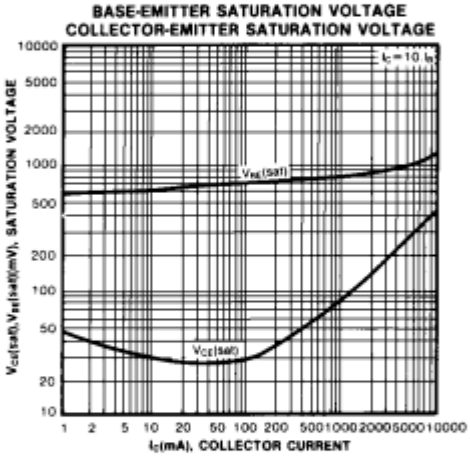
STATIC CHARACTERISTIC



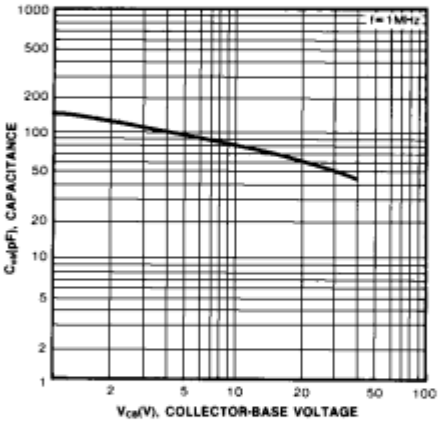
DC CURRENT GAIN



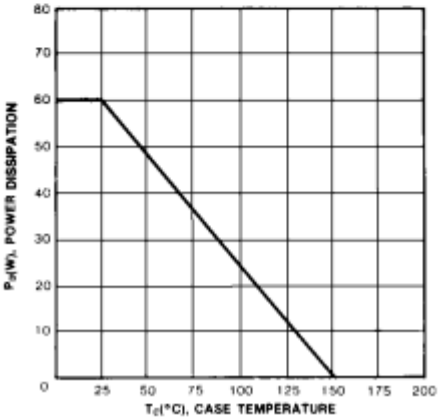
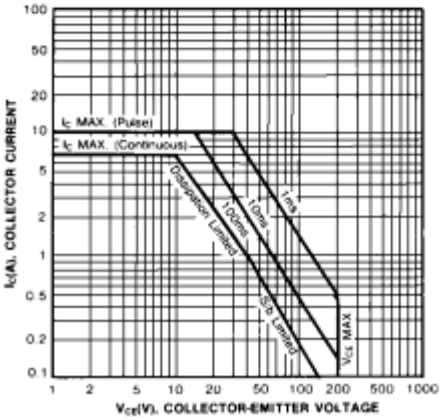
BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR OUTPUT CAPACITANCE



POWER DERATING



SAFE OPERATING AREA