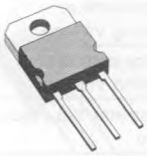
SGS-THOMSON MICROELECTRONICS

BU706

HIGH VOLTAGE NPN TRANSISTOR

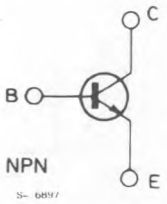
ADVANCE DATA

- HIGH VOLTAGE
- HIGH SPEED SWITCHING



TO-218

INTERNAL SCHEMATIC DIAGRAM



DESCRIPTION

The BU706 is a high voltage, high speed switching silicon multiepitaxial NPN transistor in TO-218 plastic package intended for use in horizontal deflection circuits of colour television receivers and in off-line SMPS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CES}	Collector-emitter Voltage (V_{BE} = 0)	1500	V
V_{CEO}	Collector-emitter Voltage (I_B = 0)	700	V
I_C	Collector Current	5	A
I_{CM}	Collector Peak Current (t_p < 20μs)	8	A
I_B	Base Current	3	A
I_{BM}	Base Peak Current (t_p < 20μs)	5	A
P_{tot}	Total Dissipation at T_c < 25°C	100	W
T_{stg}	Storage Temperature	– 65 to 150	°C
T_j	Max. Operating Junction Temperature	150	°C

THERMAL DATA

$R_{thj\text{-}case}$	Thermal Resistance Junction-case	max	1.25	°C/W

ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CES}	Collector Cutoff Current (V_{BE} = 0)	V_{CE} = 1500V V_{CE} = 1500V T_c = 125°C			500 1	µA mA
I_{EBO}	Emitter Cutoff Current (I_C = 0)	V_{EB} = 6V			10	mA
$V_{CEO(sus)}$*	Collector-emitter Sustaining Voltage	I_C = 0.1A L = 25mH	700			V
$V_{CE(sat)}$*	Collector-emitter Saturation Voltage	I_C = 3A I_B = 1.33A			5	V
$V_{BE(sat)}$*	Base-emitter Saturation Voltage	I_C = 3A I_B = 1.33A			1.3	V
t_f	INDUCTIVE LOAD Fall Time	IN LINE DEFLECTION CIRCUIT I_C = 3A I_B = 1A L_B = 12µH		0.7		µs

* Pulsed : pulse duration = 300µs, duty cycle = 1.5%.