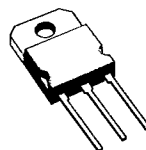


HIGH VOLTAGE NPN TRANSISTOR

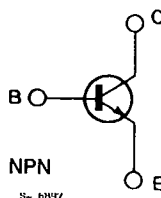
ADVANCE DATA

- 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 ($t_p < 20\mu s$)	8	A
I_B	Base Current	3	A
I_{BM}	Base Peak Current ($t_p < 20\mu s$)	5	A
P_{tot}	Total Dissipation at $T_o < 25^\circ C$	100	W
T_{stg}	Storage Temperature	- 65 to 150	$^\circ C$
T_j	Max. Operating Junction Temperature	150	$^\circ C$

THERMAL DATA

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$R_{thj-case}$	Thermal Resistance Junction-case	max	1.25	°C/W
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise specified)

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

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