

## SILICON NPN TRANSISTOR

- SGS-THOMSON PREFERRED SALESTYPE
- NPN TRANSISTOR

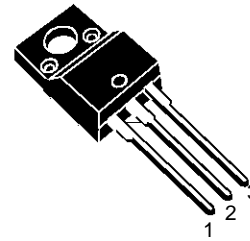
### APPLICATIONS

- HORIZONTAL DEFLECTION FOR COLOUR TV

### DESCRIPTION

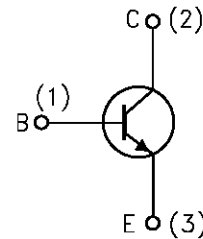
The BU407FI is a silicon epitaxial planar NPN transistors in ISOWATT220 plastic package.

It is a fast switching, high voltage device for use in horizontal deflection output stages of medium and small screens MTV receivers with 110° CRT as monochrome computer terminals.



**ISOWATT220**

### INTERNAL SCHEMATIC DIAGRAM



SC06960

### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage ( $I_E = 0$ )	330	V
$V_{CEV}$	Collector-Emitter Voltage ( $V_{BE} = -1.5$ V)	330	V
$V_{CEO}$	Collector-Emitter Voltage ( $I_B = 0$ )	150	V
$V_{EBO}$	Emitter-Base Voltage ( $I_C = 0$ )	6	V
$I_C$	Collector Current	7	A
$I_{CM}$	Collector Peak Current (repetitive)	10	A
$I_{CM}$	Collector Peak Current ( $t_p = 10$ ms)	15	A
$I_B$	Base Current	4	A
$P_{tot}$	Total Dissipation at $T_c \leq 25$ °C	25	W
$T_{stg}$	Storage Temperature	-65 to 150	°C
$T_j$	Max. Operating Junction Temperature	150	°C

**THERMAL DATA**

R <sub>thj-case</sub>	Thermal Resistance Junction-case	Max	5.0	°C/W
R <sub>thj-amb</sub>	Thermal Resistance Junction-ambient	Max	70	°C/W

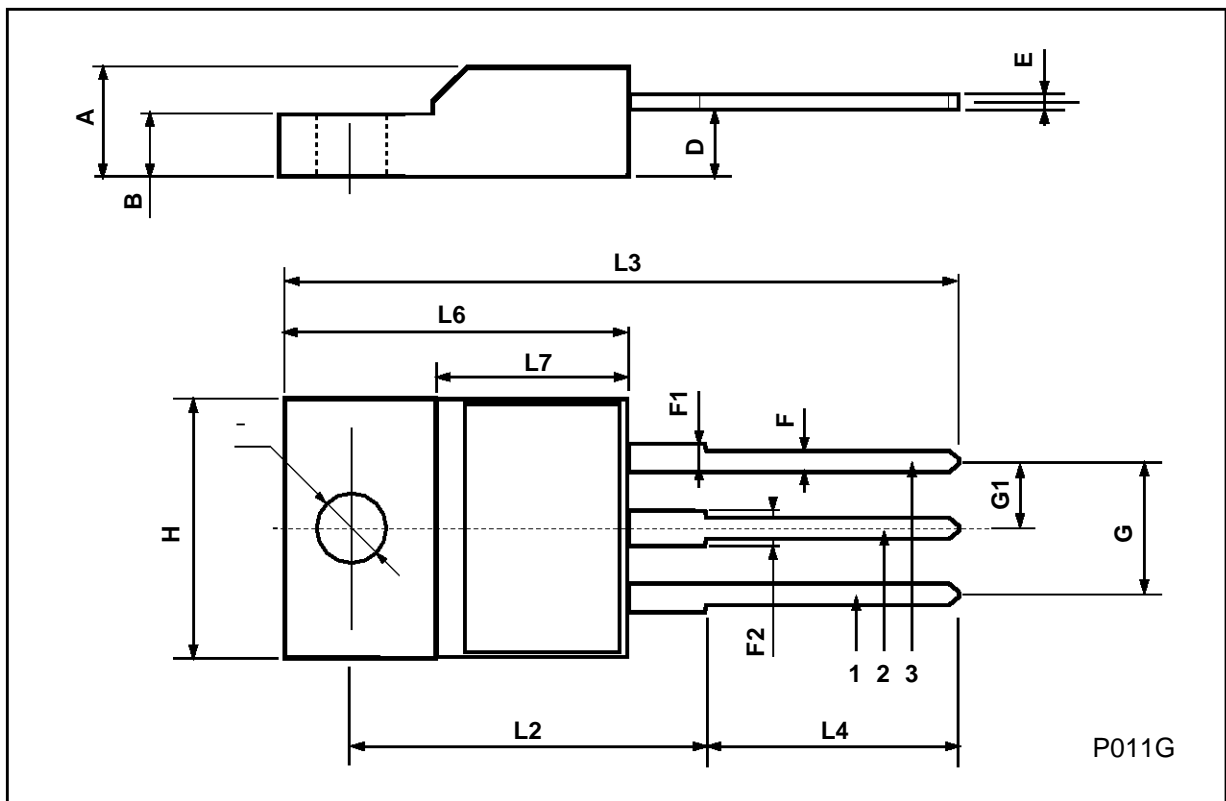
**ELECTRICAL CHARACTERISTICS** (T<sub>case</sub> = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I <sub>CES</sub>	Collector Cut-off Current (V <sub>BE</sub> = 0)	V <sub>CE</sub> = 330 V V <sub>CE</sub> = 200 V V <sub>CE</sub> = 200 V	T <sub>case</sub> = 100°C			5 100 1	mA μA mA
I <sub>EBO</sub>	Emitter Cut-off Current (I <sub>C</sub> = 0)	V <sub>EB</sub> = 6 V				1	mA
V <sub>CE(sat)*</sub>	Collector-emitter Saturation Voltage	I <sub>C</sub> = 5 A	I <sub>B</sub> = 0.5 A			1	V
V <sub>BE(sat)*</sub>	Base-emitter Saturation Voltage	I <sub>C</sub> = 5 A	I <sub>B</sub> = 0.5 A			1.2	V
f <sub>T</sub>	Transition-Frequency	I <sub>C</sub> = 0.5 A	V <sub>CE</sub> = 10 V	10			MHz
t <sub>off**</sub>	Turn-off Time	I <sub>C</sub> = 5 A	I <sub>Bend</sub> = 0.5 A			0.75	μs
I <sub>s/b</sub>	Second Breakdown Collector Current	V <sub>CE</sub> = 40 V	t = 10 ms		4		A

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

**ISOWATT220 MECHANICAL DATA**

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.4		4.6	0.173		0.181
B	2.5		2.7	0.098		0.106
D	2.5		2.75	0.098		0.108
E	0.4		0.7	0.015		0.027
F	0.75		1	0.030		0.039
F1	1.15		1.7	0.045		0.067
F2	1.15		1.7	0.045		0.067
G	4.95		5.2	0.195		0.204
G1	2.4		2.7	0.094		0.106
H	10		10.4	0.393		0.409
L2		16			0.630	
L3	28.6		30.6	1.126		1.204
L4	9.8		10.6	0.385		0.417
L6	15.9		16.4	0.626		0.645
L7	9		9.3	0.354		0.366
Ø	3		3.2	0.118		0.126



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