

SILICON NPN TRANSISTOR

- SGS-THOMSON PREFERRED SALESTYPE
- NPN TRANSISTOR

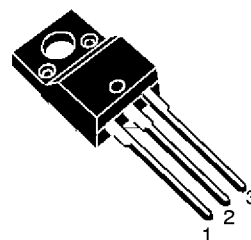
APPLICATIONS

- HORIZONTAL DEFLECTION FOR COLOUR TV

DESCRIPTION

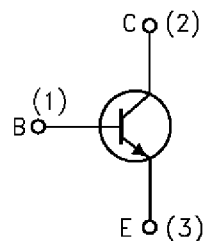
The BU407FI is a silicon epitaxial planar NPN transistors in ISOWATT220 plastic package.

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



SC08960

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

$R_{thj-case}$	Thermal Resistance Junction-case	Max	5.0	$^{\circ}C/W$
$R_{thj-amb}$	Thermal Resistance Junction-ambient	Max	70	$^{\circ}C/W$

ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CES}	Collector Cut-off Current ($V_{BE} = 0$)	$V_{CE} = 330 V$ $V_{CE} = 200 V$ $V_{CE} = 200 V$ $T_{case} = 100^{\circ}C$			5 100 1	mA μA mA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{EB} = 6 V$			1	mA
$V_{CE(sat)*}$	Collector-emitter Saturation Voltage	$I_C = 5 A$ $I_B = 0.5 A$			1	V
$V_{BE(sat)*}$	Base-emitter Saturation Voltage	$I_C = 5 A$ $I_B = 0.5 A$			1.2	V
f_T	Transition-Frequency	$I_C = 0.5 A$ $V_{CE} = 10 V$	10			MHz
t_{off**}	Turn-off Time	$I_C = 5 A$ $I_{Bend} = 0.5 A$			0.75	μs
$I_{s/b}$	Second Breakdown Collector Current	$V_{CE} = 40 V$ $t = 10 ms$		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

