

SILICON NPN SWITCHING TRANSISTOR

- STMicroelectronics PREFERRED SALESTYPE
- NPN TRANSISTOR
- VERY HIGH SWITCHING SPEED

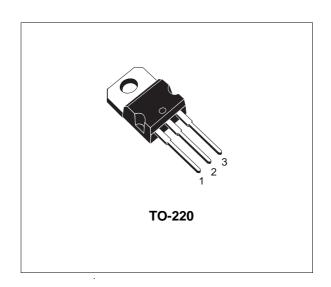
APPLICATIONS:

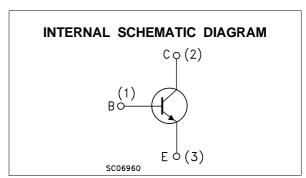
 HORIZONTAL DEFLECTION FOR MONOCHROME TV

DESCRIPTION

The BU406 is a silicon Epitaxial Planar NPN transistor in Jedec TO-220 plastic package.

It is a fast switching device for use in horizontal deflection output stages of large screens MTV receivers with 110° CRT.





ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage (I _E = 0)	400	V
VCEV	Collector-Emitter Voltage (V _{BE} = -1.5 V)	400	V
VCEO	Collector-Emitter Voltage (I _B = 0)	200	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	6	V
Ic	Collector Current	7	Α
I _{CM}	Collector Peak Current (repetitive)	10	Α
I _{CM}	Collector Peak Current (t _p < 10 ms)	15	Α
I_{B}	Base Current	4	Α
P _{tot}	Total Dissipation at T _c ≤ 25 °C	60	W
T_{stg}	Storage Temperature	-65 to 150	°C
Tj	Max. Operating Junction Temperature	150	°C

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THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-case	Max	2.08	°C/W
$R_{thj-amb}$	Thermal Resistance Junction-ambient	Max	70	°C/W

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

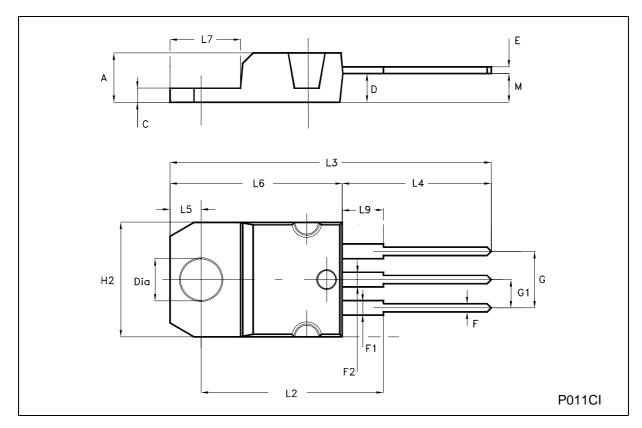
Symbol	Parameter	Test Conditions		Min.	Тур.	Max.	Unit
I _{CES}	Collector Cut-off Current (V _{BE} = 0)	V _{CE} =400 V V _{CE} =250 V V _{CE} =250 V	$T_c = 150^{\circ}C$			5 100 1	mΑ μΑ mΑ
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = 6 V				1	mA
$V_{CE(sat)^*}$	Collector-emitter Saturation Voltage	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	$I_{C} = 0.5 A$	$V_{CE} = 10V$	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		Α

^{*} Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %.

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TO-220 MECHANICAL DATA

DIM.	mm			inch			
DIIVI.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
Α	4.40		4.60	0.173		0.181	
С	1.23		1.32	0.048		0.052	
D	2.40		2.72	0.094		0.107	
E	0.49		0.70	0.019		0.027	
F	0.61		0.88	0.024		0.034	
F1	1.14		1.70	0.044		0.067	
F2	1.14		1.70	0.044		0.067	
G	4.95		5.15	0.194		0.202	
G1	2.40		2.70	0.094		0.106	
H2	10.00		10.40	0.394		0.409	
L2		16.40			0.645		
L4	13.00		14.00	0.511		0.551	
L5	2.65		2.95	0.104		0.116	
L6	15.25		15.75	0.600		0.620	
L7	6.20		6.60	0.244		0.260	
L9	3.50		3.93	0.137		0.154	
M		2.60			0.102		
DIA.	3.75		3.85	0.147		0.151	



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