

BU407

Power Transistor



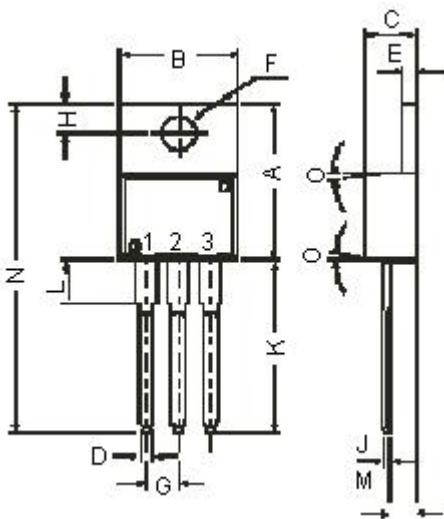
CRT Deflection Transistors



Features:

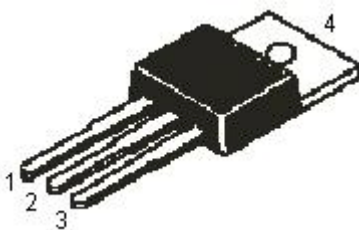
- NPN bipolar power transistors for use in high voltage, high speed transistors for horizontal deflection circuits of TVs and CRTs. Suitable for medium, high, and very high resolution monochrome and colour applications.

TO-220 Plastic Package



Dimensions	Minimum	Maximum
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	-	0.90
E	1.15	1.40
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	-	0.56
K	12.70	14.73
L	2.80	4.07
M	2.03	2.92
N	-	31.24
O	7°	

Dimensions : Millimetres



Pin Configuration:

1. Base
2. Collector
3. Emitter
4. Collector



Absolute Maximum Ratings

Parameter	Symbol		Rating	Unit
Collector Base Voltage (Open Emitter)	V_{CBO}	Maximum	330	V
Collector Emitter Voltage (Open Base)	V_{CEO}		150	
Collector Current	I_C		7.0	A
Total Power Dissipation upto $T_C = 25^\circ\text{C}$	P_{tot}		60	W
Junction Temperature	T_j		150	$^\circ\text{C}$
Collector Emitter Saturation Voltage $I_C = 5\text{A}; I_B = 0.5\text{A}$	$V_{CE(sat)}$		1.0	V

Ratings (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol		Rating	Unit
Collector Base Voltage (Open Emitter)	V_{CBO}	Maximum	330	V
Collector Emitter Voltage (Open Base)	V_{CEO}		150	
Collector Emitter Voltage ($V_{BE} = -1.5\text{V}$)	V_{CEV}		330	
Emitter Base Voltage (Open Collector)	V_{EBO}		6.0	
Collector Current	I_C		7.0	A
Collector Current Peak (Repetitive)	I_{CM}		10	
Collector Current Peak ($t = 10\text{ms}$)			15	
Base Current	I_B		4.0	W W/ $^\circ\text{C}$
Total Power Dissipation upto $T_C = 25^\circ\text{C}$ Derate above 25°C	P_{tot}		60 0.48	
Junction Temperature	T_j		150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-65 to +150		
Thermal Resistance				
From Junction to Case	$R_{th(j-c)}$	=	2.08	$^\circ\text{C/W}$
From Junction to Ambient	$R_{th(j-a)}$	=	70	

Characteristics ($T_{amb} = 25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	-	Rating	Unit
Collector Cut off Current $V_{BE} = 0; V_{CE} = 330\text{V}$ $V_{BE} = 0; V_{CE} = 200\text{V}$ $V_{BE} = 0; V_{CE} = 200\text{V}; T_C = 150^{\circ}\text{C}$	I_{CES}	Maximum	5 100 1.0	mA μA mA
Emitter Cut off Current $I_C = 0; V_{EB} = 6\text{V}$	I_{EBO}		1.0	mA
Breakdown Voltages $I_C = 100\text{mA}; I_B = 0$ $I_C = 1\text{mA}; I_E = 0$ $I_E = 1\text{mA}; I_C = 0$	$V_{CEO(sus)}^*$ V_{CBO} V_{EBO}	Minimum	150 330 6.0	V
Saturation Voltage $I_C = 5\text{A}; I_B = 0.5\text{A}$	$V_{CE(sat)}^*$ $V_{BE(sat)}^*$	Maximum	1.0 1.2	
Transition Frequency $I_C = 0.5\text{A}; V_{CE} = 10\text{V}$	f_T	Minimum	10	MHz
Switching Time $I_C = 5\text{A}; -I_{Bend} = 0.5\text{A}$ Turn off Time	t_{off}	Maximum	0.75	μs
Second Breakdown Collector Current with Base Forward Biased $V_{CE} = 40\text{V}; t = 10\text{ms}$	$I_{S/b}$	Typical	4	A

* Pulsed : Pulse Duration = 300 μs ; Duty Cycle = 1.5%.

Specifications

I_C cont. (A)	$V_{CEO(sus)}$ (A)	V_{CBO} (V)	$V_{CE(sat)}$ (V) at $I_C = 5\text{A}$	P_{tot} at 25°C (W)	Package	Part Number
7	150	330	1	60	TO-220	BU407

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