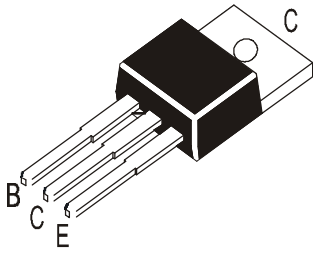


## NPN PLASTIC POWER TRANSISTORS

**BU406**  
**BU407**

**TO-220**  
**Plastic Package**



### Horizontal Deflection Output Stages of TV and CRT

#### ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )

DESCRIPTION	SYMBOL	BU406	BU407	UNIT
Collector Emitter Voltage	$V_{CEO}$	200	150	V
Collector Base Voltage	$V_{CBO}$	400	330	V
Collector Emitter Voltage	$V_{CEV}$	400	330	V
Emitter Base Voltage	$V_{EBO}$	6		V
Collector Current Continuous	$I_C$	7		A
Collector Current Repetitive Peak	$I_{CM}$	10		A
Collector Current (10ms) Peak	$I_{CM}$	15		A
Base Current	$I_B$	4		A
Power Dissipation upto $T_c=25^\circ\text{C}$	$P_D$	60		W
Derate above $25^\circ\text{C}$		480		mW/ $^\circ\text{C}$
Power Dissipation upto $T_a=25^\circ\text{C}$	$P_D$	2		W
Derate above $25^\circ\text{C}$		16		mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature	$T_j, T_{stg}$	- 65 to +150		$^\circ\text{C}$

#### THERMAL RESISTANCE

Junction to Case	$R_{th(j-c)}$	2.08	$^\circ\text{C/W}$
Junction to Ambient in free air	$R_{th(j-a)}$	62.5	$^\circ\text{C/W}$

#### ELECTRICAL CHARACTERISTICS ( $T_c=25^\circ\text{C}$ unless specified otherwise )

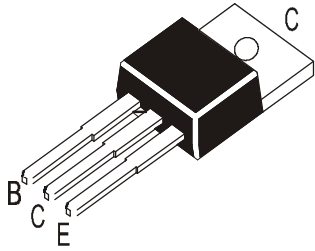
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT		
Collector Emitter (sus) Voltage	$*V_{CEO(sus)}$	$I_C=100\text{mA}, I_B=0$	<b>BU406</b>	200		V	
			<b>BU407</b>	150		V	
Collector Cut off Current	$I_{CES}$	$V_{CE}=400\text{V}, V_{BE}=0$	<b>BU406</b>		5.0	mA	
			<b>BU407</b>		5.0	mA	
		$V_{CE}=250\text{V}, V_{BE}=0$	<b>BU406</b>		0.1	mA	
			<b>BU407</b>		0.1	mA	
		$T_c=150^\circ\text{C}$	$V_{CE}=250\text{V}, V_{BE}=0$	<b>BU406</b>		1.0	mA
				<b>BU407</b>		1.0	mA

\*Pulse Test : Pulse width  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 1\%$

# PLASTIC POWER TRANSISTORS

**BU406  
BU407**

**TO-220  
Plastic Package**



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

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Emitter Cut off Current	I <sub>EBO</sub>	V <sub>EB</sub> =6V, I <sub>C</sub> =0		1.0	mA
Collector Emitter Saturation Voltage	*V <sub>CE (sat)</sub>	I <sub>C</sub> =5A, I <sub>B</sub> =0.5A		1.0	V
Base Emitter Saturation Voltage	*V <sub>BE (sat)</sub>	I <sub>C</sub> =5A, I <sub>B</sub> =0.5A		1.2	V
DC Current Gain	*h <sub>FE</sub>	I <sub>C</sub> =5A, V <sub>CE</sub> =1V	10		

## DYNAMIC CHARACTERISTIC

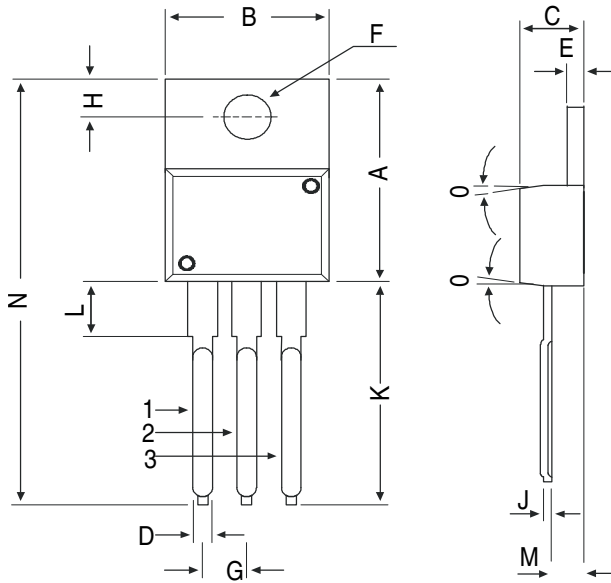
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Transition Frequency	f <sub>T</sub>	I <sub>C</sub> =0.5A, V <sub>CE</sub> =10V, f=20MHz	10		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz		Typ. 80	pF

## SWITCHING CHARACTERISTICS

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Inductive Load Crossover Time	t <sub>c</sub>	V <sub>cc</sub> =40V, I <sub>c</sub> =5A, I <sub>B1</sub> =I <sub>B2</sub> =0.5A, L=150μH		0.75	μs

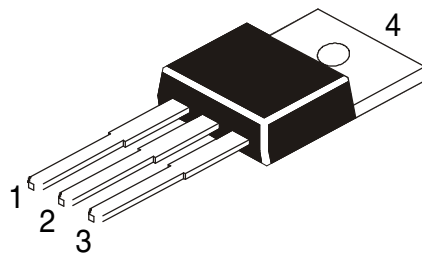
\*Pulse Test : Pulse width ≤300ms, Duty Cycle ≤ 1%

**TO-220 Plastic Package**



DIM	MIN	MAX
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 DEG	

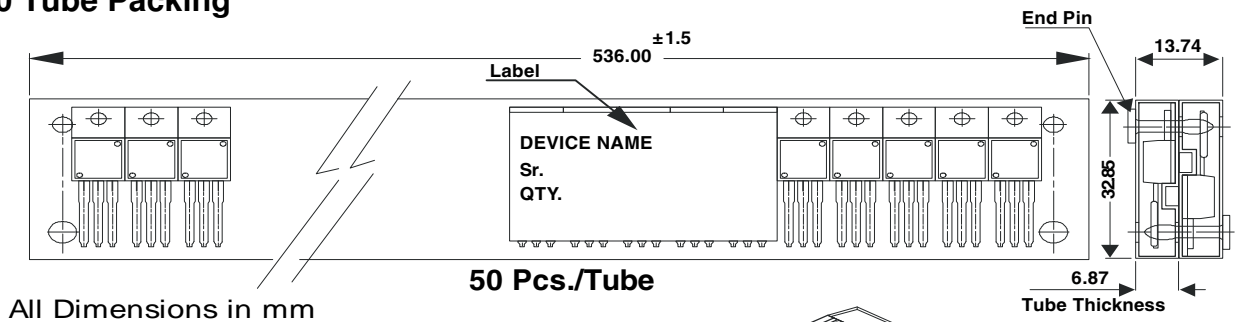
All dimensions in mm.



**Pin Configuration**

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

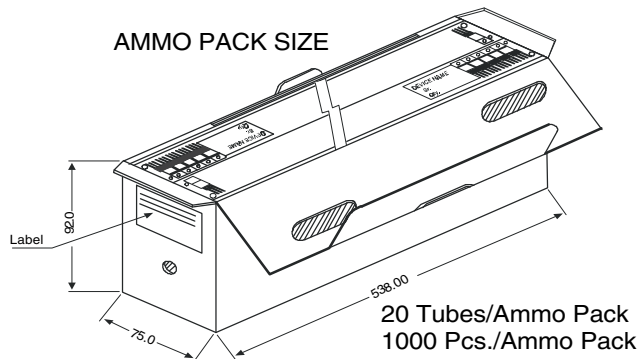
**TO-220 Tube Packing**



All Dimensions in mm

**50 Pcs./Tube**

**AMMO PACK SIZE**



20 Tubes/Ammo Pack  
1000 Pcs./Ammo Pack

**Packing Details**

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-220	200 pcs/polybag	396 gm/200 pcs	3" x 7.5" x 7.5"	1.0K	17" x 15" x 13.5"	16.0K	36 kgs
	50 pcs/tube	120 gm/50 pcs	3.5" x 3.7" x 21.5"	1.0K	19" x 19" x 19"	10.0K	29 kgs

### **Disclaimer**

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