

## BU406 – BU407

### NPN SILICON EPITAXIAL-BASE POWER TRANSISTORS

They are NPN transistors mounted in Jedec TO-220 plastic package.

They are intended for use in horizontal deflection output stages of large screens MTV receivers with 110o CRT and horizontal deflection for monochrome TV.

They are very high switching speed.

Compliance to RoHS.

#### ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings	Value	Unit	
$V_{CEO}$	Collector-Emitter Voltage ( $I_B=0$ )	BU406	200	V
		BU407	150	
$V_{CBO}$	Collector-Base Voltage ( $I_E=0$ )	BU406	400	V
		BU407	330	
$V_{CEX}$	Collector-Emitter Voltage ( $V_{BE} = -2V$ )	BU406	400	V
		BU407	330	
$V_{EBO}$	Emitter-Base Voltage ( $I_C=0$ )	6	V	
$I_C$	Collector Current	7	A	
$I_{CM}$	Peak Collector Current (10 ms)	15	A	
$I_B$	Base Current	4	A	
$P_D$	Total Device Dissipation ( $T_C = 25^\circ C$ )	60	W	
$T_J$	Junction Temperature	150	$^\circ C$	
$T_{Stg}$	Storage Temperature range	-65 to +150	$^\circ C$	

#### THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
$R_{thJ-a}$	Thermal Resistance, Junction to mounting base	70	$^\circ C/W$
$R_{thJ-mb}$	Thermal Resistance, Junction to ambient in free air	2.08	$^\circ C/W$

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### ELECTRICAL CHARACTERISTICS

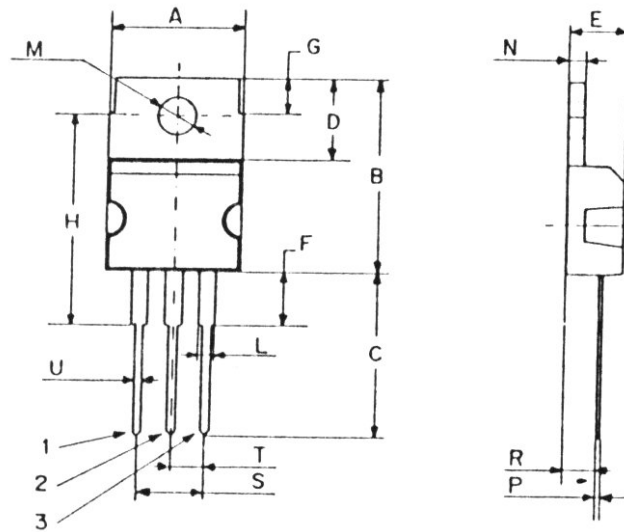
TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit	
$I_{CES}$	Collector-Emitter Cutoff Current	$V_{CE}=400\text{ V}, V_{BE}=0\text{ V}$	BU406	-	-	5	mA
		$V_{CE}=330\text{ V}, V_{BE}=0\text{ V}$	BU407	-	-	5	
		$V_{CE}=250\text{ V}, V_{BE}=0\text{ V}$	BU406	-	-	0.1	
		$V_{CE}=200\text{ V}, V_{BE}=0\text{ V}$	BU407	-	-	0.1	
		$V_{CE}=450\text{ V}, V_{BE}=0\text{ V}$ $T_C = 150^\circ\text{C}$	BU406	-	-	1	
		$V_{CE}=200\text{ V}, V_{BE}=0\text{ V}$ $T_C = 150^\circ\text{C}$	BU407	-	-	1	
$I_{EBO}$	Emitter Cutoff Current	$V_{BE}=6\text{ V}, I_C=0$	BU406 BU407	-	-	1	mA
$V_{CEO}$	Collector Emitter Breakdown Voltage	$I_C=30\text{ m A}, I_B=0$	BU406	140	-	-	V
			BU407	150	-	-	
$V_{CE(SAT)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{ A}, I_B=500\text{ mA}$	BU406	-	-	1	V
			BU407	-	-	1.2	
$V_{BE(SAT)}$	Base-Emitter Saturation Voltage	$I_C=5\text{ A}, I_B=500\text{ mA}$	BU406	-	-	1.2	V
			BU407	-	-	1.2	
$h_{FE}$	Dc Current Gain	$I_C=4\text{ A}, V_{CE}=10\text{ V}$	BU406	12	-	-	-
		$I_C=0.5\text{ A}, V_{CE}=10\text{ V}$	BU407	20	-	-	
$f_T$	Transition Frequency	$I_C=0.5\text{ A}, V_{CE}=10\text{ V}$ $f=20\text{ MHz}$	BU406	10	-	-	MHz
			BU407				
$C_{obo}$	Output Capacitance	$V_{CB}=10\text{ V}, I_E=0$ $f=1\text{ MHz}$	BU406	-	80	-	pFA
			BU407				
$t_f$	Fall Time	$I_C=2\text{ A}, V_{CC}=40\text{ V}$ $I_{B1}=-I_{B2}=0.5\text{ A}$ $L=150\text{ }\mu\text{H}$	BU406	-	-	0.75	$\mu\text{s}$
			BU407				

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### MECHANICAL DATA CASE TO-220

DIMENSIONS (mm)		
	Min.	Max.
A	9,90	10,30
B	15,65	15,90
C	13,20	13,40
D	6,45	6,65
E	4,30	4,50
F	2,70	3,15
G	2,60	3,00
H	15,75	17,15
L	1,15	1,40
M	3,50	3,70
N	-	1,37
P	0,46	0,55
R	2,50	2,70
S	4,98	5,08
T	2,49	2,54
U	0,70	0,90



Pin 1 :	Base
Pin 2 :	Collector
Pin 3 :	Emitter
Case :	Collector

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