

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

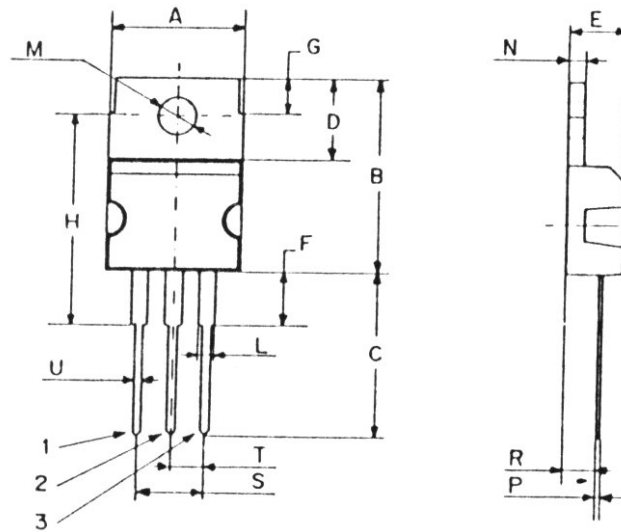
TC=25°C unless otherwise noted

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	μs
			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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