

isc Silicon NPN Power Transistor

BU406D

DESCRIPTION

- High Voltage: $V_{CEV} = 400V(\text{Min})$
- Fast Switching Speed-
: $t_f = 0.75 \mu s(\text{Max})$
- Low Saturation Voltage-
: $V_{CE(\text{sat})} = 1.0V(\text{Max}) @ I_C = 5A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

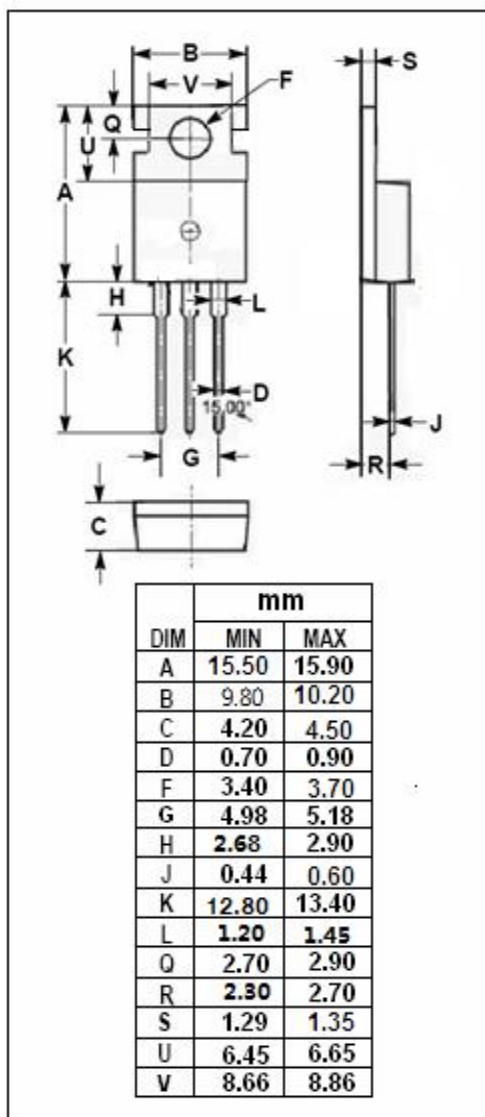
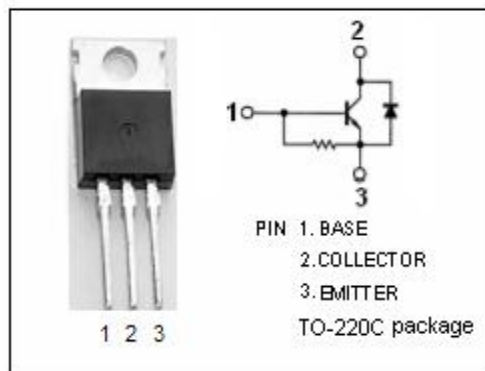
- Designed for use in horizontal deflection output stages of TV's and CRT's

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	400	V
V_{CEV}	Collector-Emitter Voltage	400	V
V_{CEO}	Collector-Emitter Voltage	200	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	7	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current	4	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	60	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	2.08	$^\circ\text{C/W}$



isc Silicon NPN Power Transistor**BU406D****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA ; I _B = 0	200			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 0.65A			1.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 0.65A			1.3	V
h _{FE}	DC Current Gain	I _C = 2A; V _{CE} = 5V;		15		
I _{CEV}	Collector Cutoff Current	V _{CE} = 400V; V _{BE} = -1.5V			15	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			400	mA
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A ; V _{CE} = 10V, f _{test} = 1MHz	10			MHz
V _{ECF}	C-E Diode Forward Voltage	I _F = 5A			1.5	V
t _f	Fall Time	I _C = 5A; I _{B1} = -I _{B2} = 0.65A, V _{CC} = 40V			0.75	μs

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