

# BUY69A

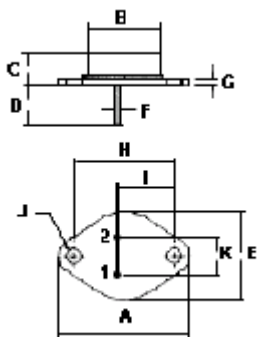
## High Voltage Power Transistor



High Voltage Power Switch are designed for horizontal deflection output stage of CTV receivers and high voltage, fast switching and industrial application.

### Features:

- Collector-Emitter Sustaining Voltage-100mA  
 $V_{CEO(sus)} = 400V$  (Minimum).
- Optimum Drive Condition Curves.



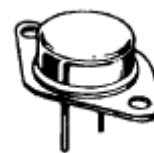
Pin 1. Base  
2. Emitter  
Collector(Case)

Dimensions	Minimum	Maximum
A	38.75	39.96
B	19.28	22.23
C	7.96	9.28
D	11.18	12.19
E	25.20	26.67
F	0.92	1.09
G	1.38	1.62
H	29.90	30.40
I	16.64	17.30
J	3.88	4.36
K	10.67	11.18

Dimensions : Millimetres

**NPN**  
**BUY69A**

10 Ampere  
Silicon Power  
Transistor  
400 Volts  
100 Watts



**TO-3**

### Maximum Ratings

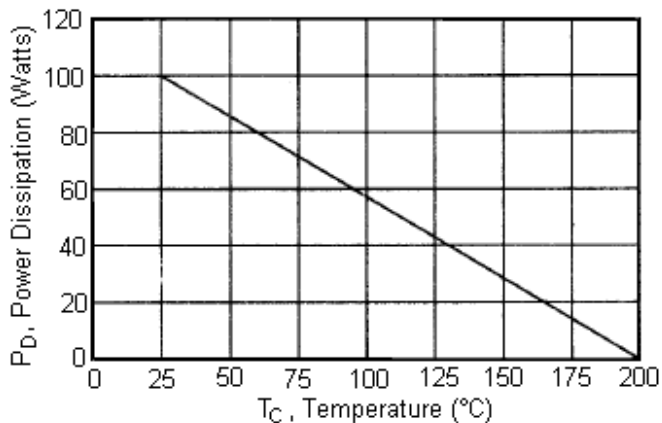
Characteristic	Symbol	Rating	Unit
Collector-Emitter Voltage ( $V_{BE} = 0V$ )	$V_{CBS}$	1000	V
Collector-Emitter Voltage	$V_{CEO}$	400	
Emitter-Base Voltage	$V_{EBO}$	8.0	
Collector Current-Continuous -Peak	$I_C$ $I_{CM}$	10 15	A
Base Current-Peak	$I_B$	3.0	
Total Power Dissipation at $T_C = 25^\circ C$ Derate above $25^\circ C$	$P_D$	100 0.57	W W/ $^\circ C$
Operating and Storage Junction Temperature Range	$T_J, T_{STG}$	-65 to +200	$^\circ C$



### Thermal Characteristics

Characteristic	Symbol	Maximum	Unit
Thermal Resistance Junction to Case	$R_{\theta jc}$	1.75	$^{\circ}\text{C/W}$

Figure - 1 Power Derating



### Electrical Characteristics ( $T_C = 25^{\circ}\text{C}$ unless otherwise noted)

Characteristic	Symbol	Minimum	Maximum	Unit
<b>OFF Characteristics</b>				
Collector-Emitter Sustaining Voltage (1) ( $I_C = 100\text{mA}$ , $I_B = 0$ )	$V_{CEO(sus)}$	400	-	V
Collector-Base Voltage ( $I_C = 1.0\text{mA}$ , $I_E = 0$ )	$V_{CBO}$	1000	-	
Collector Cut off Current ( $V_{CE} = 1000\text{V}$ , $V_{BE} = 0$ )	$I_{CES}$	-	1.0	mA
Emitter-Base Cut off Current ( $V_{EB} = 8\text{V}$ , $I_C = 0$ )	$I_{EBO}$	-		
<b>ON Characteristics (1)</b>				
DC Current Gain ( $V_{CE} = 10\text{V}$ , $I_C = 2.5\text{A}$ )	$h_{FE}$	15	-	-
Collector-Emitter Saturation Voltage ( $I_C = 8\text{A}$ , $I_B = 2.5\text{A}$ )	$V_{CE(sat)}$	-	3.3	V
Base-Emitter Saturation Voltage ( $I_C = 8\text{A}$ , $I_B = 2.5\text{A}$ )	$V_{BE(sat)}$	-	2.2	
<b>Dynamic Characteristics</b>				
Current Gain-Bandwidth Product (2) ( $I_C = 500\text{mA}$ , $V_{CE} = 10\text{V}$ , $f = 1\text{MHz}$ )	$f_T$	10	-	MHz

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Characteristics		Symbol	Minimum	Maximum	Unit
<b>Switching Characteristics</b>					
Rise Time	$V_{CC} = 250V, I_C = 5A,$ $I_{B1} = -I_{B2} = 1.0A$	$t_r$	-	0.3	$\mu s$
Storage Time		$t_s$	-	1.8	
Fall Time		$t_f$	-	1.0	

(1) Pulse Test: Pulse Width = 300 $\mu s$ , Duty Cycle  $\leq 2.0\%$ .

(2)  $f_T = |h_{fe}| \cdot f_{test}$ .

### Specifications

$I_{C(av)}$ maximum (A)	$V_{CEO}$ maximum (V)	$V_{CBS}$ maximum (V)	$V_{CE(Sat)}$ (V) at $I_C = 8A$	$t_f$ maximum ( $\mu s$ )	$P_{tot}$ at 25°C (W)	Package	Type	Part Number
10	400	1000	3.3	1.0	100	TO-3	NPN	BUY69A

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### Notes:

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