

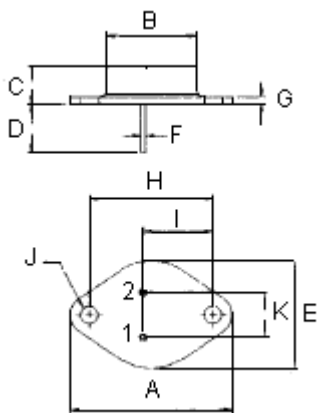


High voltage power switch.
 designed for horizontal deflection output stage of CTV receivers and high voltage, fast switching
 and industrial application.

Features:

- Collector-emitter sustaining voltage - 100mA.
- $V_{CEO(sus)} = 400V$ (minimum).
- Optimum drive condition curves.

TO-3



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
 Transistors
 200 - 400 Volts
 100 Watts



TO-3

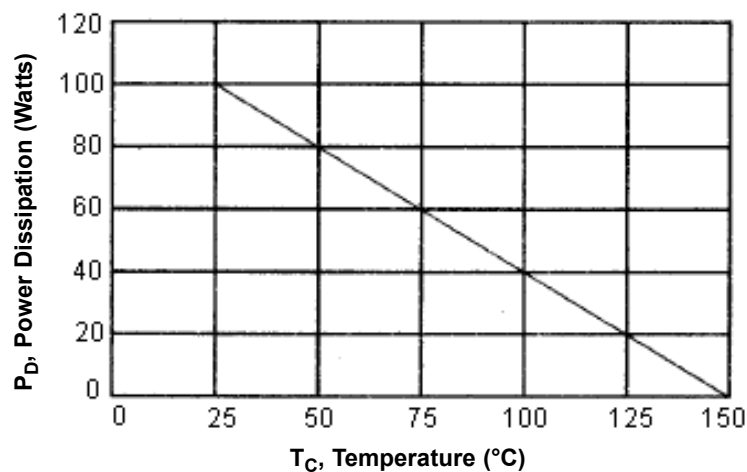
Maximum Ratings

Characteristic	Symbol	BUY69A	Unit
Collector-Emitter Voltage ($V_{BE} = 0$)	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 $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	100 0.57	W W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +200	$^\circ\text{C}$

Thermal Characteristics

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

Power Derating



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

Characteristic	Symbol	Minimum	Maximum	Unit
Off Characteristics				
Collector-Emitter Sustaining Voltage (1) ($I_C = 100\text{mA}$, $I_B = 0$)	BUY69A $V_{CEO(sus)}$	400	-	V
Collector-Base Voltage ($I_C = 1.0\text{mA}$, $I_E = 0$)	BUY69A V_{CBO}	1000	-	
Collector Cut off Current ($V_{CE} = 1000\text{V}$, $V_{BE} = 0$)	BUY69A I_{CES}	-	1.0	mA
Emitter-Base Cut off Current ($V_{EB} = 8.0\text{V}$, $I_C = 0$)	I_{EBO}	-		
On Characteristics (1)				
DC Current Gain ($V_{CE} = 10\text{V}$, $I_C = 2.5\text{A}$)	h_{FE}	15	-	-
Collector-Emitter Saturation Voltage ($I_C = 8.0\text{A}$, $I_B = 2.5\text{A}$)	$V_{CE(sat)}$	-	3.3	V
Base-Emitter Saturation Voltage ($I_C = 8.0\text{A}$, $I_B = 2.5\text{A}$)	$V_{BE(sat)}$	-	2.2	
Dynamic Characteristics				
Current Gain-Bandwidth Product (2) ($I_C = 500\text{mA}$, $V_{CE} = 10\text{V}$, $f = 1\text{MHz}$)	f_T	10	-	MHz

Switching Characteristics					
Rise Time	$V_{CC} = 250\text{V}$, $I_C = 5\text{A}$	t_r	-	0.3	μs
Storage Time	$I_{B1} = -I_{B2} = 1.0\text{A}$	t_s	-	1.8	
Fall Time	-	t_f	-	1.0	

(1) Pulse Test : Pulse Width = 300μs, Duty Cycle ≤2.0%.

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

Part Number Table

Description	Part Number
Transistor, NPN, TO-3	BUY69A

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