

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-100 mA

$V_{CEO(sus)} = 400V$ (Min) BUY69A
 325V (Min) BUY69B
 200V (Min) BUY69C

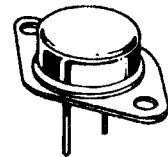
* Optimum Drive Condition Curves

NPN
BUY69A
BUY69B
BUY69C

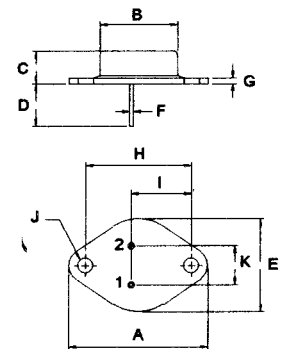
10 AMPERE
 SILICON POWER
 TRANSISTORS
 200-400 VOLTS
 100 WATTS

MAXIMUM RATINGS

Characteristic	Symbol	BUY69A	BUY69B	BUY69C	Unit
Collector-Emitter Voltage ($V_{BE}=0$)	V_{CBS}	1000	800	500	V
Collector-Emitter Voltage	V_{CEO}	400	325	200	V
Emitter-Base Voltage	V_{EBO}	8.0			V
Collector Current - Continuous - Peak	I_C I_{CM}	10 15			A
Base Current-Peak	I_B	3.0			A
Total Power Dissipation @ $T_C = 25^\circ C$ 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			$^\circ C$



TO-3

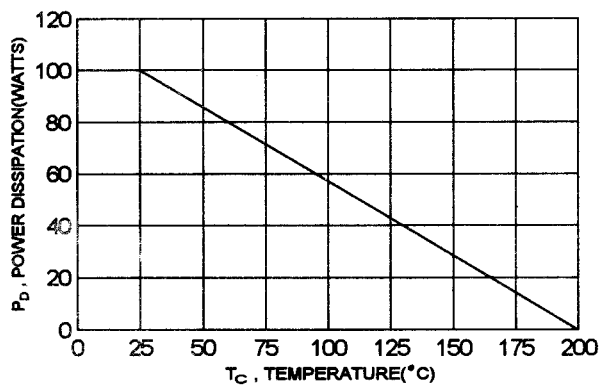


PIN 1. BASE
 2. EMITTER
 COLLECTOR(CASE)

THERMAL CHARACTERISTICS

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

FIGURE -1 POWER DERATING



DIM	MILLIMETERS	
	MIN	MAX
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

ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Sustaining Voltage(1) ($I_C = 100\text{ mA}$, $I_B = 0$)	BUY69A BUY69B BUY69C	$V_{CEO(sus)}$	400 325 200	V
Collector-Base Voltage ($I_C = 1.0\text{ mA}$, $I_E = 0$)	BUY69A BUY69B BUY69C	V_{CBO}	1000 800 500	V
Collector Cutoff Current ($V_{CE} = 1000\text{ V}$, $V_{BE} = 0$) ($V_{CE} = 800\text{ V}$, $V_{BE} = 0$) ($V_{CE} = 500\text{ V}$, $V_{BE} = 0$)	BUY69A BUY69B BUY69C	I_{CES}		1.0 1.0 1.0 mA
Emitter -Base Cutoff Current ($V_{EB} = 8.0\text{ V}$, $I_C = 0$)		I_{EBO}		1.0 mA

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 V

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
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SWITCHING CHARACTERISTICS

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

(1) Pulse Test: Pulse width = 300 us , Duty Cycle $\leq 2.0\%$

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