MOSPEC

HIGH VOLTAGE POWER SWITCH

... designed for horizontal deflection output stage of CTV receivers and high voltage,fast s witching and induatrial application.

NPN
BUY69A
BUY69B
BUY69C

10 AMPERE
SILICON POWER
TRANSISTORS
200-400 VOLTS
100 WATTS

FEATURES

* Collector-Emitter Sustaining Voltage-100 mA
  $V_{CEO(sus)}$= 400V (Min) BUY69A
  325V (Min) BUY69B
  200V (Min) BUY69C
* Optimum Drive Condition Curves

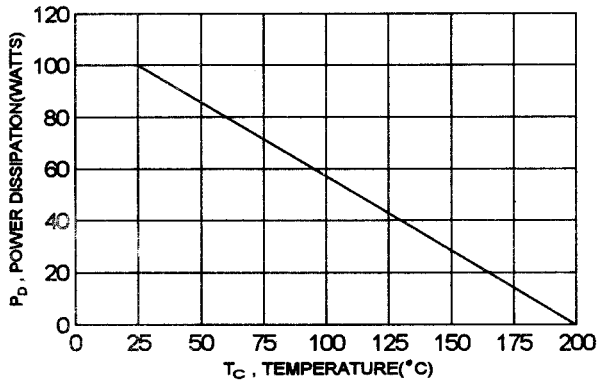
MAXIMUM RATINGS

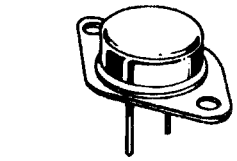
Characteristic	Symbol	BUY69A	BUY69B	BUY69C	Unit
Collector-Emitter Voltage(V_{BE}=0)	V_{CBS}	1000	800	500	V
Collector-Emitter Voltage	V_{CEO}	400	325	200	V
Emitter-Base Voltage	V_{EBO}	8.0			V
Collector Current - Continuous - Peak	I_C I_{CM}	10 15			A
Base Current-Peak	I_B	3.0			A
Total Power Dissipation @T_C = 25°C Derate above 25°C	P_D	100 0.57			W W/°C
Operating and Storage Junction Temperature Range	T_J,T_{STG}	-65 to +200			°C

THERMAL CHARACTERISTICS

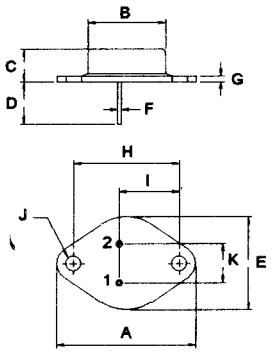
Characteristic	Symbol	Max	UNIT
Thermal Resistance Junction to Case	Rθjc	1.75	°C/W

FIGURE -1 POWER DERATING





TO-3



PIN 1.BASE
2.EMITTER
COLLECTOR(CASE)

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°C unless otherwise noted)

Characteristic		Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Sustaining Voltage(1) (I_C= 100 mA, I_B= 0)	BUY69A BUY69B BUY69C	$V_{CEO(sus)}$	400 325 200		V
Collector-Base Voltage (I_C= 1.0 mA, I_E= 0)	BUY69A BUY69B BUY69C	V_{CBO}	1000 800 500		V
Collector Cutoff Current (V_{CE}= 1000 V, V_{BE}=0) (V_{CE}= 800 V , V_{BE}=0) (V_{CE}= 500 V , V_{BE}=0)	BUY69A BUY69B BUY69C	I_{CES}		1.0 1.0 1.0	mA
Emitter -Base Cutoff Current (V_{EB}= 8.0 V, I_C= 0)		I_{EBO}		1.0	mA
ON CHARACTERISTICS (1)					
DC Current Gain (V_{CE} = 10 V, I_C =2.5 A)		h_{FE}	15		
Collector-Emitter Saturation Voltage (I_C =8.0 A,I_B= 2.5 A)		$V_{CE(sat)}$		3.3	V
Base-Emitter Saturation Voltage (I_C =8.0 A, I_B= 2.5 A)		$V_{BE(sat)}$		2.2	V
DYNAMIC CHARACTERISTICS					
Current Gain-Bandwidth Product (2) (I_C= 500 mA, V_{CE}= 10 V,f = 1MHz)		f_T	10		MHz
SWITCHING CHARACTERISTICS					
Rise Time	V_{CC}= 250V,I_C= 5A I_{B1}=-I_{B2}= 1.0A	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 ≦ 2.0%

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