



BUY69A

HIGH VOLTAGE NPN SILICON TRANSISTOR

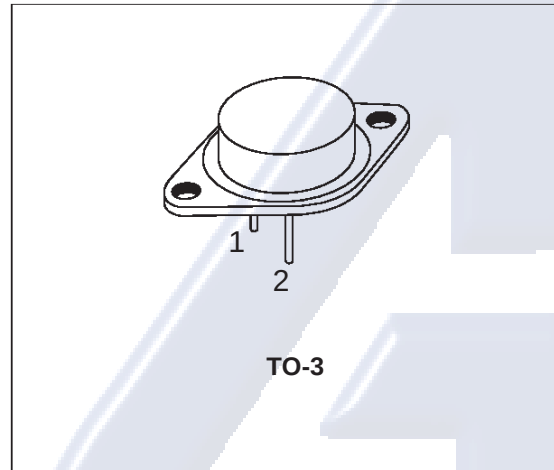
- STM PREFERRED SALESTYPE
- NPN TRANSISTOR
- HIGH VOLTAGE CAPABILITY
- HIGH CURRENT CAPABILITY
- FAST SWITCHING SPEED
- HIGH POWER TO-3 PACKAGE

APPLICATIONS:

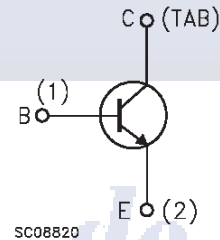
- HORIZONTAL DEFLECTION FOR COLOUR TV
- SWITCHING REGULATORS

DESCRIPTION

The BUY69A is a silicon multiepitaxial mesa NPN transistor in Jedec TO-3 metal case. It is intended for horizontal deflection output stage of CTV receivers and high voltage, fast switching and industrial applications.



INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CES}	Collector-Emitter Voltage ($V_{BE} = 0$)	1000	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	400	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	8	V
I_C	Collector Current	10	A
I_{CM}	Collector Peak Current ($t_p \leq 10$ ms)	15	A
I_B	Base Current	3	A
P_{tot}	Total Dissipation at $T_c \leq 25$ °C	100	W
T_{stg}	Storage Temperature	-65 to 200	°C
T_j	Max. Operating Junction Temperature	200	°C

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THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	1.75	$^{\circ}C/W$
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I_{CES}	Collector Cut-off Current ($V_{BE} = 0$)	$V_{CE} = 1000\text{ V}$				1	mA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{EB} = 8\text{ V}$				1	mA
$V_{CEO(sus)}$	Collector-Emitter Sustaining Voltage	$I_C = 100\text{ mA}$		1000			V
$V_{CE(sat)}^*$	Collector-Emitter Saturation Voltage	$I_C = 8\text{ A}$	$I_B = 2.5\text{ A}$			3.3	V
$V_{BE(sat)}^*$	Base-Emitter Saturation Voltage	$I_C = 8\text{ A}$	$I_B = 2.5\text{ A}$			2.2	V
h_{FE}^*	DC Current Gain	$I_C = 2.5\text{ A}$	$V_{CE} = 10\text{ V}$	15			
f_T	Transition Frequency	$I_C = 0.5\text{ A}$	$V_{CE} = 10\text{ V}$		10		MHz
$I_{S/b}^{**}$	Second Breakdown Collector Current	$V_{CE} = 25\text{ V}$		4			A
t_{on}	Turn on Time	$I_C = 5\text{ A}$ $I_{B1} = 1\text{ A}$	$V_{CE} = 250\text{ V}$		0.2		μs
t_s t_s	Storage Time Fall Time	$I_C = 5\text{ A}$ $I_{B1} = - I_{B2} = 1\text{ A}$	$V_{CE} = 250\text{ V}$			1.7 0.3	μs μs
t_f	Fall Time	$I_C = 8\text{ A}$ $I_{B1} = - I_{B2} = 2.5\text{ A}$	$V_{CE} = 40\text{ V}$			1	μs

* Pulsed: Pulse duration = 300 μs , duty cycle 1.5 %

** Pulsed: 1s, non repetitive pulse.

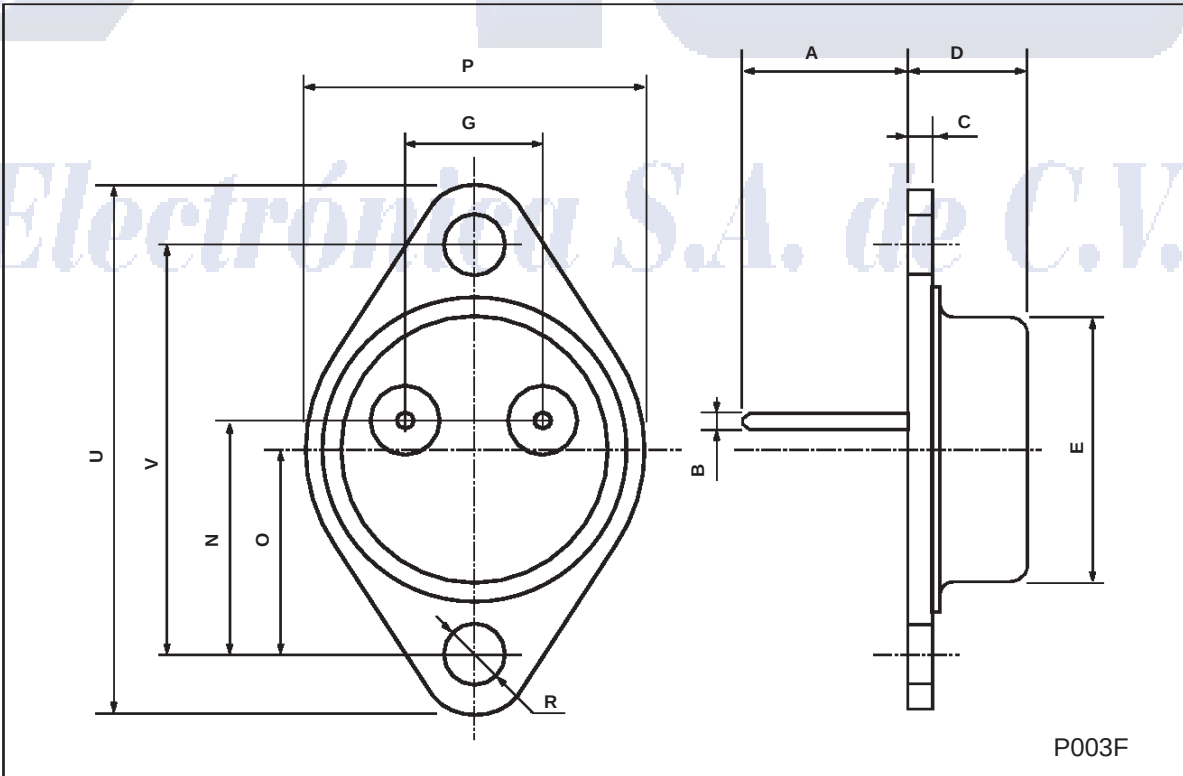
For characteristics curves see the BUW34/5/6 series.

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TO-3 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	11.00		13.10	0.433		0.516
B	0.97		1.15	0.038		0.045
C	1.50		1.65	0.059		0.065
D	8.32		8.92	0.327		0.351
E	19.00		20.00	0.748		0.787
G	10.70		11.10	0.421		0.437
N	16.50		17.20	0.649		0.677
P	25.00		26.00	0.984		1.023
R	4.00		4.09	0.157		0.161
U	38.50		39.30	1.515		1.547
V	30.00		30.30	1.187		1.193



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