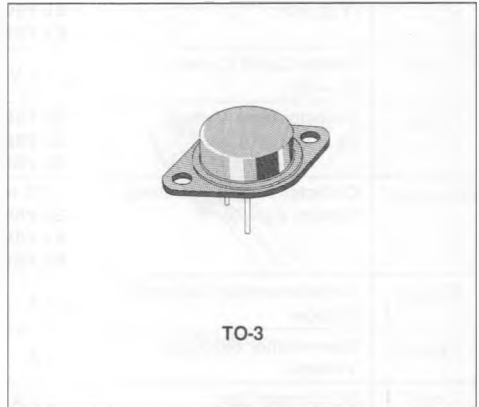
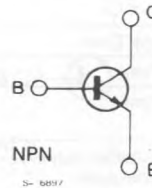


MULTIEPITAXIAL MESA NPN
DESCRIPTION

The BUY69A, BUY69B, and BUY69C are silicon multiepitaxial mesa NPN transistors in Jedec TO-3 metal case. They are intended for horizontal deflection output stage of CTV receivers and high voltage, fast switching and industrial applications.



TO-3

INTERNAL SCHEMATIC DIAGRAM

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value			Unit
		BUY69A	BUY69B	BUY69C	
V_{CES}	Collector-emitter Voltage ($V_{BE} = 0$)	1000	800	500	V
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	400	325	200	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 Power Dissipation at $T_{case} \leq 25$ °C	100			W
T_{stg}	Storage Temperature	- 65 to 200			°C
T_j	Junction Temperature	200			°C

THERMAL DATA

$R_{th(j-case)}$	Thermal Resistance Junction-case	Max	1.75	C/W
------------------	----------------------------------	-----	------	-----

ELECTRICAL CHARACTERISTICS ($T_{case} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CES}	Collector Cutoff Current ($V_{BE} = 0$)	for BUY69A $V_{CE} = 1000\text{ V}$ for BUY69B $V_{CE} = 800\text{ V}$ for BUY69C $V_{CE} = 500\text{ V}$			1 1 1	mA mA mA
I_{EBO}	Emitter Cutoff Current ($I_C = 0$)	$V_{EB} = 8\text{ V}$			1	mA
V_{CBO}	Collector-base Voltage ($I_E = 0$)	for BUY69A $I_C = 1\text{ mA}$ for BUY69B $I_C = 1\text{ mA}$ for BUY69C $I_C = 1\text{ mA}$	1000 800 500			V V V
$V_{CEO(sus)}^*$	Collector-emitter Sustaining Voltage ($I_B = 0$)	$I_C = 100\text{ mA}$ for BUY69A for BUY69B for BUY69C	400 325 200			V V 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	$I_C = 5\text{ A}$ $V_{CE} = 250\text{ V}$ $I_{B1} = 1\text{ A}$		0.2		μs
t_s	Storage Time	$I_C = 5\text{ A}$ $V_{CE} = 250\text{ V}$ $I_{B1} = -I_{B2} = 1\text{ A}$		1.7		μs
t_f	Fall Time			0.3		μs
t_f	Fall Time	$I_C = 8\text{ A}$ $V_{CE} = 40\text{ V}$ $I_{B1} = -I_{B2} = 2.5\text{ A}$			1	μs

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

** Pulsed : 1 s, non repetitive pulse.

For characteristics curves see the BUW 34/5/6 series.