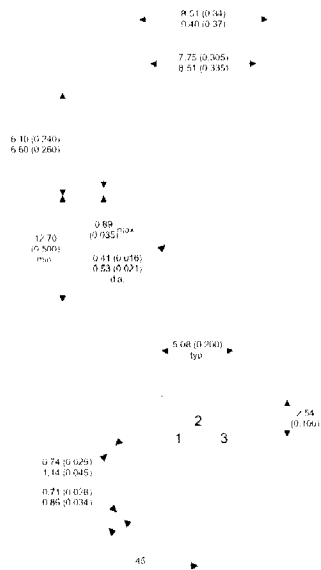


BUY82

MECHANICAL DATA

Dimensions in mm(Inches)



TO39 PACKAGE(TO205AD)

Pin 1 = Emitter Pin 2 = Base Pin 3 = Collector

**NPN SILICON PLANAR EPITAXIAL
 TRANSISTOR IN HERMETICALLY
 SEALED METAL CASE**

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

V_{CBO}	Maximum Collector to Base Continuous Voltage	150V
V_{CEO}	Maximum Collector to Emitter Continuous voltage	60V
V_{EBO}	Maximum Emitter to Base Continuous reverse Voltage	7V
I_C	Maximum Continuous Collector Current	10A
I_B	Maximum Continuous Base Current	2A
P_{TOT}	Maximum total Power Dissipation up to $T_{case} = 25^{\circ}C$	30W
	$T_{case} = 100^{\circ}C$	15W
	$T_{amb} = 25^{\circ}C$	1W
T_c	Junction Temperature	-65 to +175°C
T_{stg}	Storage Temperature	150°C

THERMAL CHARACTERISTICS

$R_{th\ j-case}$	Thermal resistance to case	Max	5.0°C/W
$R_{th\ j-amb}$	Thermal resistance junction to ambient	Max	150°C/W

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

	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
h_{21E}	Static value of common-emitter forward current transfer ratio *	$V_{CE} = 5V$ $I_C = 1.5A$ $V_{CE} = 5V$ $I_C = 10A$	40 15			—
$V_{CE(SAT)}$	Collector-Emitter Saturation Voltage*	$I_C = 10A$ $I_B = 5V$ $I_C = 1.5A$ $I_B = 150mA$			1.0 0.8	V
$V_{BE(SAT)}$	Base - Emitter Saturation Voltage*	$I_C = 10A$ $I_B = 1.0A$ $I_C = 1.5A$ $I_B = 150mA$			1.8 1.2	
I_{CBO}	Collector - Base Cut-off Current	$V_{CB} = 100V$ $I_E = 0$ $T_{Case} = 150^{\circ}C$			500	μA
I_{EBO}	Emitter - Base Cut-off Current	$V_{EB} = 5V$ $I_C = 0$			10	
t_{on}	Turn on time	$I_C = 5A$ $I_{B1} = 0.5A$ $I_C = 10A$ $I_{B1} = 1A$			1 1.5	μs
t_{off}	Turn off time	$I_C = 5A$ $I_{B1} = - I_{B2} = 0.5A$ $I_C = 10A$ $I_{B1} = - I_{B2} = 1A$			1 1	
C_{22b}	Output capacitance	$V_{CB} = 10V$ $I_E = 0$ $f = 1MHz$			200	pF
C_{11b}	Input capacitance	$V_{EB} = 0.5V$ $I_C = 0$ $f = 1MHz$			850	
f_T	Transition Frequency	$V_{CE} = 10V$ $I_C = 100mA$ $f = 20MHz$	40			MHz

* Measured under pulse conditions: Pulse length = 300 ms, duty cycle = 1.5%