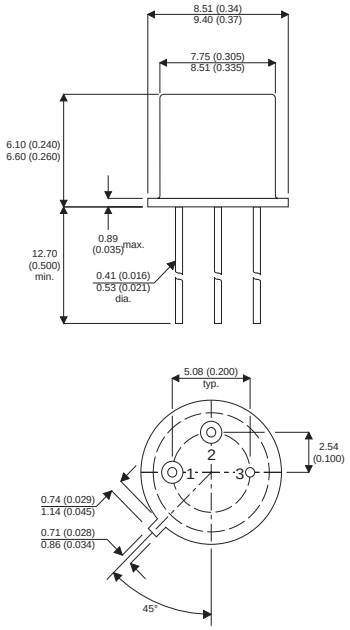
BUY82

NPN SILICON PLANAR EPITAXIAL TRANSISTOR IN HERMETICALLY SEALED METAL CASE

MECHANICAL DATA
Dimensions in mm(Inches)



TO39 PACKAGE(TO205AD)

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

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V_{CBO}	Maximum Collector to Base Continuous Voltage	150V
V_{CEO}	Maximum Collector to Emitter Continous voltage	60V
V_{EBO}	Maximum Emitter to Base Continouse 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°C	30W
	T_{case}= 100°C	15W
	T_{amb} = 25°C	1W
T_c	Junction Temperature	-65 to +175°C
T_{stg}	Storage Temperature	150°C

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SEME LAB

BUY82

THERMAL CHARACTERISTICS

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

ELECTRICAL CHARACTERISTICS (T_{case} = 25°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	40			—
		V_{CE} = 5v	I_C = 10A	15			
$V_{CE(SAT)}$	Collector-Emitter Saturation Voltage*	I_C = 10A	I_B = 5V			1.0	V
		I_C = 1.5A	I_B = 150mA			0.8	
$V_{BE(SAT)}$	Base - Emitter Saturation Voltage*	I_C = 10A	I_B = 1.0A			1.8	
		I_C = 1.5A	I_B = 150mA			1.2	
I_{CBO}	Collector - Base Cut-off Current	V_{CB} = 100V	I_E = 0			10	µA
			T_{Case} = 150°C			500	
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			1	µs
		I_C = 10A	I_{B1} = 1A			1.5	
t_{off}	Turn off time	I_C = 5A	I_{B1} = - I_{B2} =0.5A			1	
		I_C = 10A	I_{B1} = - I_{B2} = 1A			1	
C_{22b}	Output capacitance	V_{CB} = 10V f =1MHz	I_E = 0			200	pF
C_{11b}	Input capacitance	V_{EB} = 0.5V f =1MHz	I_C = 0			850	
f_T	Transition Frequency	V_{CE} = 10V f = 20MHz	I_C = 100mA	40			MHz

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

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