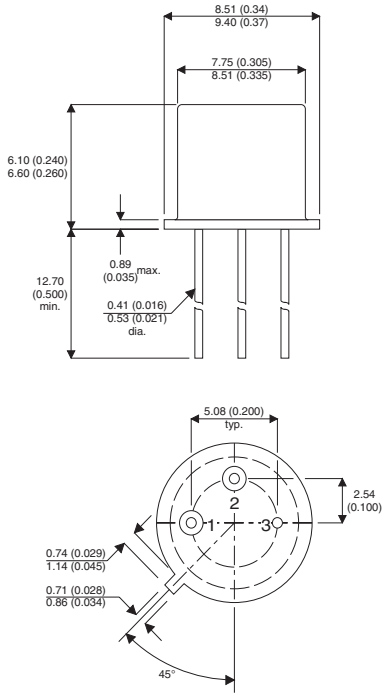
BSW67A

MECHANICAL DATA

Dimensions in mm (inches)



Underside View
TO39 PACKAGE (TO-205AD)

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

SILICON NPN PLANAR TRANSISTOR

FEATURES

- V_{CBO} = 120V
- V_{CEO} = 120V
- I_C = 1.0A

DESCRIPTION

General Purpose NPN Transistor in a Hermetic TO39 Package

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

V_{CBO}	Collector – Base Voltage (open emitter)	120V
V_{CEO}	Collector – Emitter Voltage (open base)	120V
I_C	Collector Current (d.c.)	1.0A
I_{CM}	Collector Current (peak value)	2A
P_{TOT}	Total Device Dissipation @ $T_{amb} \leq 45°C$	0.7W
P_{TOT}	Total Device Dissipation @ $T_C \leq 25°C$	5W
P_{TOT}	Total Device Dissipation @ $T_C \leq 100°C$	2.85W
T_{stg}	Storage Temperature	–65 to 200°C
T_j	Junction Temperature	200°C
$R_{\theta JC}$	Thermal Resistance Junction to Case	35°C / W
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	220°C / W

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SEME LAB

BSW67A

ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)CEO}$*	Collector – Emitter Breakdown Voltage	I_C = 10mA	I_B = 0	120			V
$V_{(BR)CBO}$*	Collector – Base Breakdown Voltage	I_C = 100µA	I_E = 0	120			V
$V_{(BR)EBO}$*	Emitter – Base Breakdown Voltage	I_E = 100µA	I_C = 0	6			V
I_{CBO}	Collector Cut-off Current	V_{CB} = 60V	I_E = 0			0.1	µA
		V_{CB} = 60V T_{amb} = 150°C	I_E = 0			50	
$V_{CE(sat)}$*	Collector – Emitter Saturation Voltage	I_C = 0.1A	I_B = 0.01A			0.15	V
		I_C = 0.5A	I_B = 0.05A			0.5	
		I_C = 1.0A	I_B = 0.15A			1.0	
$V_{BE(sat)}$*	Base – Emitter Saturation Voltage	I_C = 0.1A	I_B = 0.01A			0.9	V
		I_C = 0.5A	I_B = 0.05A			1.1	
		I_C = 1.0A	I_B = 0.15A			1.2	
h_{FE}*	DC Current Gain	I_C = 0.1A	V_{CE} = 5V	40			—
		I_C = 0.5A	V_{CE} = 5V	30			
		I_C = 1.0A	V_{CE} = 5V	15			

t* Pulse test t_p = 300µs , $\delta \leq 1.5\%$

DYNAMIC CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

Parameter		Test Conditions			Min.	Typ.	Max.	Unit
f_T	Transition Frequency	I_C = 100mA	V_{CE} = 20V	f = 35MHz	50			MHz
C_{obo}	Output Capacitance	V_{CB} = 10V	I_E = 0	f = 1.0MHz			20	pF
C_{ibo}	Input Capacitance	V_{EB} = 0	I_E = 0	f = 1.0MHz			300	pF
t_{on}	Turn–On Time	I_C = 0.5A	V_{CC} = 20V			0.3		µs
t_{off}	Turn–Off Time	I_{B1} =- I_{B2} = 0.05A				1.0		

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