

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

BSS50
BSS51
BSS52

NPN SILICON
DARLINGTON TRANSISTORS

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR BSS50 series types are NPN Silicon Darlington Transistors designed for industrial switching applications.

MAXIMUM RATINGS (T_A=25°C)

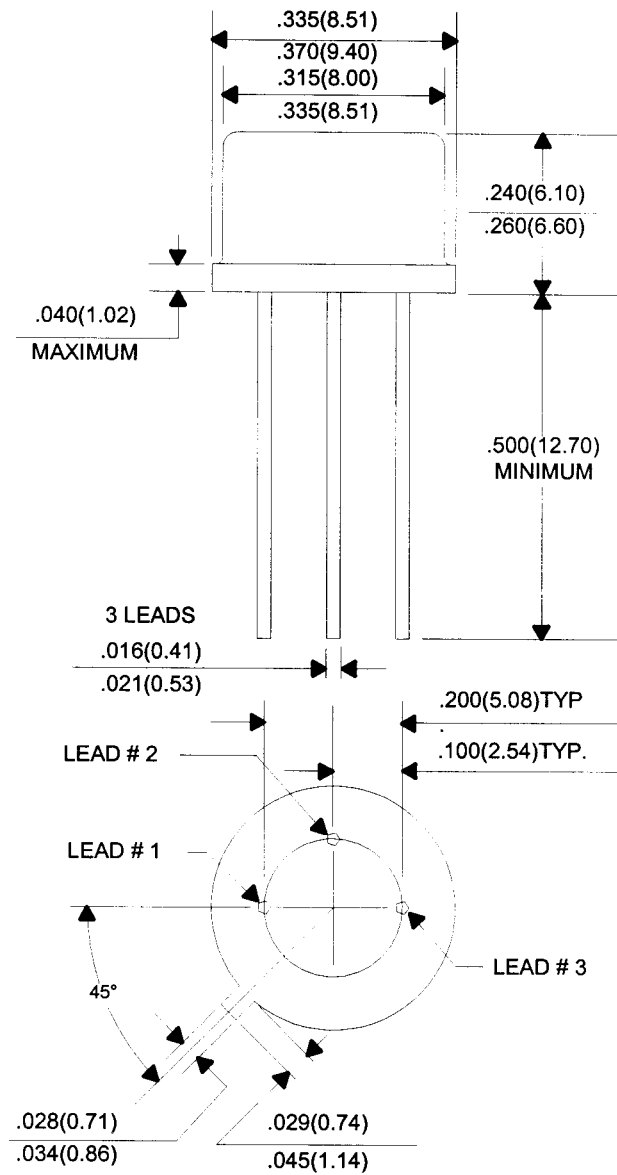
	SYMBOL	BSS50	BSS51	BSS52	UNITS
Collector-Base Voltage	V _{CB0}	60	80	90	V
Collector-Emitter Voltage	V _{CER}	45	60	80	V
Emitter-Base Voltage	V _{EBO}		5.0		V
Collector Current	I _C		1.0		A
Collector Current (Peak)	I _{CM}		2.0		A
Base Current (Peak)	I _{BM}		100		mA
Power Dissipation	P _D		0.8		W
Power Dissipation (T _C =25°C)	P _D		5.0		W
Operating and Storage					
Junction Temperature	T _J , T _{stg}		-65 to +200		°C
Thermal Resistance	θ _{JA}		219		°C/W
Thermal Resistance	θ _{JC}		35		°C/W

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	BSS50		BSS51		BSS52		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
I _{CB0}	V _{CB} =Rated V _{CER}		50		50		50	nA
I _{EBO}	V _{EB} =4.0V		50		50		50	nA
V _{CE(SAT)}	I _C =500mA, I _B =500μA		1.3		1.3		1.3	V
V _{CE(SAT)}	I _C =500mA, I _B =500μA, T _A =200°C		1.3		1.3		1.3	V
V _{CE(SAT)}	I _C =1.0A, I _B =1.0mA		-		1.6		-	V
V _{CE(SAT)}	I _C =1.0A, I _B =1.0mA, T _A =200°C		-		2.3		-	V
V _{CE(SAT)}	I _C =1.0A, I _B =4.0mA		1.6		-		1.6	V
V _{CE(SAT)}	I _C =1.0A, I _B =4.0mA, T _A =200°C		1.6		-		1.6	V
V _{BE(SAT)}	I _C =500mA, I _B =500μA		1.9		1.9		1.9	V
V _{BE(SAT)}	I _C =1.0A, I _B =1.0mA		-		2.2		-	V
V _{BE(SAT)}	I _C =1.0A, I _B =4.0mA		2.2		-		2.2	V
V _{BE(ON)}	V _{CE} =10V, I _C =150mA	1.3	1.65	1.3	1.65	1.3	1.65	V
V _{BE(ON)}	V _{CE} =10V, I _C =500mA	1.4	1.75	1.4	1.75	1.4	1.75	V
h _{FE}	V _{CE} =10V, I _C =150mA		1K		1K		1K	
h _{FE}	V _{CE} =10V, I _C =500mA		2K		2K		2K	
h _{fe}	V _{CE} =5.0V, I _C =500mA, f=35MHz		10 TYP		10 TYP		10 TYP	
t _{on}	I _C =500mA, I _{B1} =I _{B2} =0.5mA		0.4 TYP		0.4 TYP		0.4 TYP	μs
t _{off}	I _C =500mA, I _{B1} =I _{B2} =0.5mA		1.5 TYP		1.5 TYP		1.5 TYP	μs
t _{on}	I _C =1.0A, I _{B1} =I _{B2} =1.0mA		0.4 TYP		0.4 TYP		0.4 TYP	μs
t _{off}	I _C =1.0A, I _{B1} =I _{B2} =1.0mA		1.5 TYP		1.5 TYP		1.5 TYP	μs

(See Reverse Side)

JEDEC TO-39 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

Lead Code:

1. Emitter
2. Base
3. Collector

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