Data Sheet

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Manufacturers of World Class Discrete Semiconductors

2N5058
2N5059

NPN SILICON TRANSISTOR

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5058, 2N5059 types are NPN Silicon Epitaxial Planar Transistors designed for high voltage, general purpose amplifier applications.

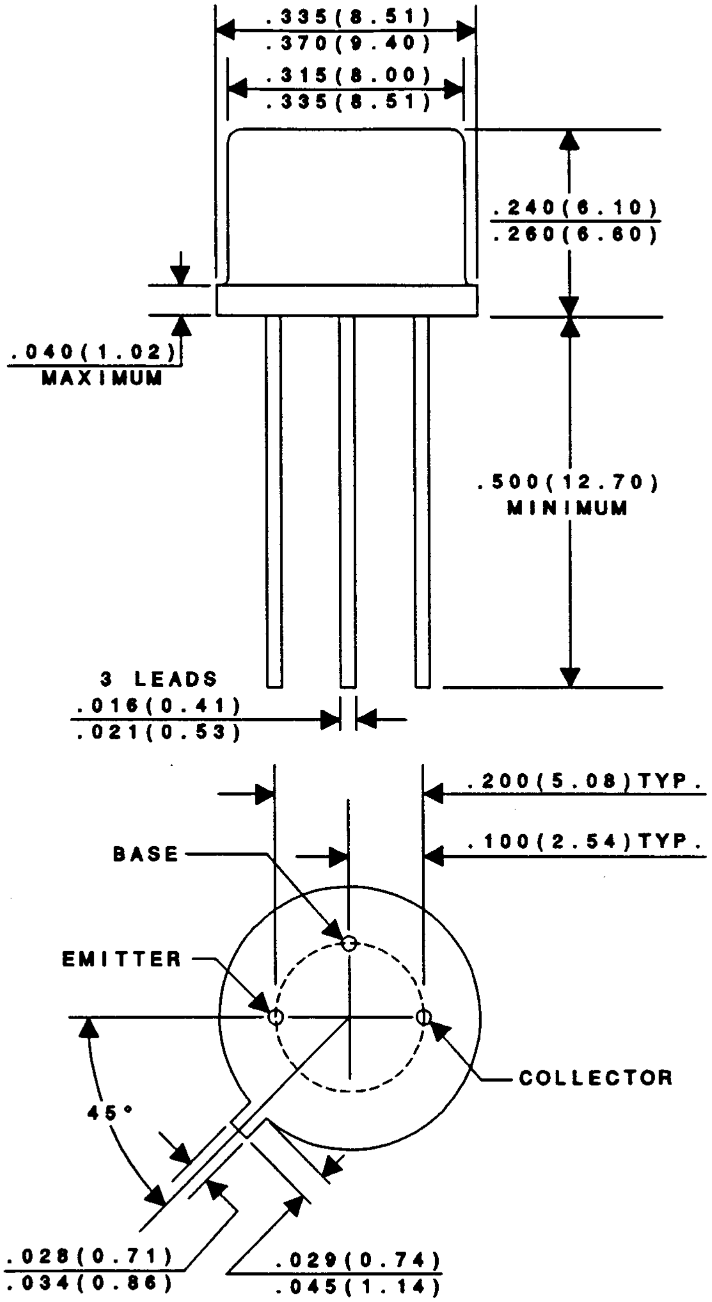
MAXIMUM RATINGS (T$_A$=25°C)

	SYMBOL	2N5058	2N5059	UNITS
Collector-Base Voltage	V_{CBO}	300	250	V
Collector-Emitter Voltage	V_{CEO}	300	250	V
Emitter-Base Voltage	V_{EBO}	7.0	6.0	V
Continuous Collector Current	I_C	150		mA
Power Dissipation	P_D	1.0		mW
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}	150		°C/W
Thermal Resistance	Θ_{JC}	30		°C/W

ELECTRICAL CHARACTERISTICS (T$_A$=25°C unless otherwise noted)

		2N5058		2N5059		
SYMBOL	TEST CONDITIONS	MIN	MAX	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=100V$		50		50	nA
I_{CBO}	$V_{CB}=100V,\ T_A=125°C$		20		20	μA
I_{EBO}	$V_{EB}=5.0V$		10		10	nA
BV_{CBO}	$I_C=100μA$	300		250		V
BV_{CEO}	$I_C=30mA$	300		250		V
BV_{EBO}	$I_C=100μA$	7.0		6.0		V
$V_{CE(SAT)}$	$I_C=30mA,\ I_B=3.0mA$		1.0		1.0	V
$V_{BE(SAT)}$	$I_C=30mA,\ I_B=3.0mA$		0.85		0.85	V
$V_{BE(ON)}$	$V_{CE}=25V,\ I_C=30mA$		0.82		0.82	V
h_{FE}	$V_{CE}=25V,\ I_C=5.0mA$	10			10	
h_{FE}	$V_{CE}=25V,\ I_C=30mA$	35	150	30	150	
h_{FE}	$V_{CE}=25V,\ I_C=30mA,\ T_A=-55°C$	10		-		
h_{FE}	$V_{CE}=25V,\ I_C=100mA$	35		30		
f_T	$V_{CE}=25V,\ I_C=10mA,\ f=20MHz$	30	160	30	160	MHz
C_{cb}	$V_{CB}=10V,\ I_E=0,\ f=1.0MHz$		10		10	pF
C_{eb}	$V_{BE}=0.5V,\ I_C=0,\ f=1.0MHz$		75		75	pF

JEDEC TO-39 CASE - MECHANICAL DIMENSIONS



All Dimensions in Inches (mm).

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