Central
Semiconductor Corp.
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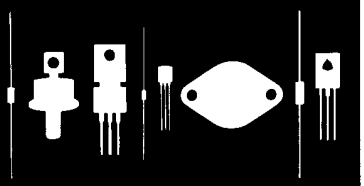
145 Adams Avenue
Hauppauge, New York 11788



2N5336
2N5337
2N5338
2N5339

NPN SILICON TRANSISTOR

JEDEC TO-39 CASE

145 Adams Avenue, Hauppauge, NY 11788 USA
Tel: (631) 435-1110 • Fax: (631) 435-1824

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5336 series types are silicon NPN epitaxial planar transistors in a hermetically sealed metal package designed for power amplifier and switching power supplies where very low saturation voltage and high speed switching at high current levels are needed.

MAXIMUM RATINGS (T_C=25°C)

	SYMBOL	2N5336 2N5337	2N5338 2N5339	UNIT
Collector-Base Voltage	V_{CBO}	80	100	V
Collector-Emitter Voltage	V_{CEO}	80	100	V
Emitter-Base Voltage	V_{EBO}	6.0	6.0	V
Collector Current (Continuous)	I_C	5.0	5.0	A
Base Current	I_B	1.0	1.0	A
Power Dissipation	P_D	6.0	6.0	W
Operating and Storage Junction Temperature	T_J, T_{STG}	-65 TO +200		°C
Thermal Resistance	Θ_{JC}	29		°C/W

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

SYMBOL	TEST CONDITIONS	2N5336 2N5337 MIN	2N5336 2N5337 MAX	2N5338 2N5339 MIN	2N5338 2N5339 MAX	UNIT
I_{CBO}	V_{CB}=Rated V_{CBO}		10		10	µA
I_{CEV}	V_{CE}=75V, $V_{EB(OFF)}$=1.5V		10		-	µA
I_{CEV}	V_{CE}=90V, $V_{EB(OFF)}$=1.5V		-		10	µA
I_{CEV}	V_{CE}=75V, $V_{EB(OFF)}$=1.5V, T_C=150°C		1.0		-	mA
I_{CEV}	V_{CE}=90V, $V_{EB(OFF)}$=1.5V, T_C=150°C		-		1.0	mA
I_{CEO}	V_{CE}=75V		100		-	µA
I_{CEO}	V_{CE}=90V		-		100	µA
I_{EBO}	V_{BE}=6.0V		100		100	µA
BV_{CEO}	I_C=50mA	80		100		V
$V_{CE(SAT)}$	I_C=2.0A, I_B=0.2A		0.7		0.7	V
$V_{CE(SAT)}$	I_C=5.0A, I_B=0.5A		1.2		1.2	V
$V_{BE(SAT)}$	I_C=2.0A, I_B=0.2A		1.2		1.2	V
$V_{BE(SAT)}$	I_C=5.0A, I_B=0.5A		1.8		1.8	V
h_{FE}	V_{CE}=2.0V, I_C=500mA (2N5336, 2N5338)	30		30		
h_{FE}	V_{CE}=2.0V, I_C=500mA (2N5337, 2N5339)	60		60		
h_{FE}	V_{CE}=2.0V, I_C=2.0A (2N5336, 2N5338)	30	120	30	120	
h_{FE}	V_{CE}=2.0V, I_C=2.0A (2N5337, 2N5339)	60	240	60	240	
h_{FE}	V_{CE}=2.0V, I_C=5.0A (2N5336, 2N5338)	20		20		
h_{FE}	V_{CE}=2.0V, I_C=5.0A (2N5337, 2N5339)	40		40		
f_T	V_{CE}=10V, I_C=0.5A, f=10MHz	30		30		MHz
C_{ob}	V_{CB}=10V, I_E=0, f=0.1MHz		250		250	pF
C_{ib}	V_{BE}=2.0V, I_C=0, f=0.1MHz		1000		1000	pF
t_{on}	V_{CC}=40V, I_C=2.0A, I_{B1}=0.2A		200		200	ns
t_s	V_{CC}=40V, I_C=2.0A, I_{B1}=I_{B2}=0.2A		2.0		2.0	µs
t_f	V_{CC}=40V, I_C=2.0A, I_{B1}=I_{B2}=0.2A		200		200	ns