

New Jersey Semi-Conductor Products, Inc.

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2N5336
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2N5338
2N5339

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NPN SILICON TRANSISTOR

DESCRIPTION

JEDEC TO-39 CASE

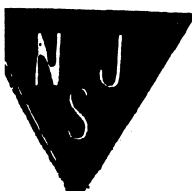
2N5336 series types are silicon NPN epitaxial planar transistors in a hermetically sealed metal package designed for power amplifier and switching power supplies where very low saturation voltage and high speed switching at high current levels are needed.

MAXIMUM RATINGS (T_C=25°C)

	SYMBOL	2N5336 2N5337	2N5338 2N5339	UNIT
Collector-Base Voltage	V _{CB0}	80	100	V
Collector-Emitter Voltage	V _{CE0}	80	100	V
Emitter-Base Voltage	V _{EB0}	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		2N5338 2N5339		UNIT
		MIN	MAX	MIN	MAX	
I _{CB0}	V _{CB} =Rated V _{CB0}		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 _{CE0}	V _{CE} =75V		100		-	μA
I _{CE0}	V _{CE} =90V		-		100	μA
I _{EB0}	V _{BE} =6.0V		100		100	μA
BV _{CE0}	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



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