Central
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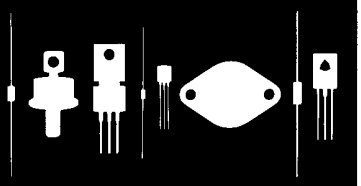

2N4960 2N4961 TO-39 CASE
2N4962 2N4963 TO-18 CASE

NPN SILICON TRANSISTORS

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N4960 Series types are Silicon NPN Epitaxial Planar Transistors designed for general purpose amplifier and switching applications.

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

	SYMBOL	2N4960, 2N4962	2N4961, 2N4963	UNIT
Collector-Base Voltage	V_{CBO}	60	80	V
Collector-Emitter Voltage	V_{CEO}	60	80	V
Emitter-Base Voltage	V_{EBO}	6.5	6.5	V
Collector Current	I_C	1.0	1.0	A
		2N4960, 2N4961	2N4962, 2N4963	
Power Dissipation	P_D	0.8	0.5	W
Power Dissipation (T_C=25°C)	P_D	3.5	1.5	W
Operating & Storage Junc. Temp.	T_J, T_{stg}	-65 TO +200		°C

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
I_{CBO}	V_{CB}=50V		10	nA
I_{EBO}	V_{EB}=4.0V		10	nA
BV_{CBO}	I_C=10μA (2N4960,2)	60		V
BV_{CBO}	I_C=10μA (2N4961,3)	80		V
BV_{CES}	I_C=10μA (2N4960,2)	60		V
BV_{CES}	I_C=10μA (2N4961,3)	80		V
BV_{CEO}	I_C=10mA (2N4960,2)	60		V
BV_{CEO}	I_C=10mA (2N4961,3)	80		V
BV_{EBO}	I_E=10μA	6.5		V
$V_{CE(SAT)}$	I_C=10mA, I_B=1.0mA		0.07	V
$V_{CE(SAT)}$	I_C=150mA, I_B=15mA		0.18	V
$V_{CE(SAT)}$	I_C=300mA, I_B=30mA		0.31	V
$V_{CE(SAT)}$	I_C=500mA, I_B=50mA		0.5	V
$V_{BE(SAT)}$	I_C=10mA, I_B=1.0mA		0.72	V
$V_{BE(SAT)}$	I_C=150mA, I_B=15mA	0.78	0.90	V
$V_{BE(SAT)}$	I_C=300mA, I_B=30mA		1.05	V
$V_{BE(SAT)}$	I_C=500mA, I_B=50mA		1.30	V
$V_{BE(ON)}$	V_{CE}=10V, I_C=150mA		0.88	V
h_{FE}	V_{CE}=10V, I_C=100μA	30		
h_{FE}	V_{CE}=10V, I_C=1.0mA	60		
h_{FE}	V_{CE}=10V, I_C=10mA	90		
h_{FE}	V_{CE}=10V, I_C=50mA	100		
h_{FE}	V_{CE}=1.0V, I_C=150mA	40		
h_{FE}	V_{CE}=10V, I_C=150mA	100	300	
h_{FE}	V_{CE}=10V, I_C=300mA	70		
h_{FE}	V_{CE}=10V, I_C=500mA	45		
f_T	V_{CE}=10V, I_C=50mA, f=100MHz	100		MHz
C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz		15	pF
Cib	VEB=0.5V, IC=0, f=1.0MHz		75	pF