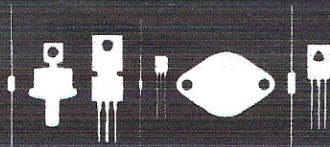


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2N5814 2N5816 2N5818 NPN
2N5815 2N5817 2N5819 PNP

COMPLEMENTARY SILICON
TRANSISTORS

T0-92-18R CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5814 Series types are epoxy molded Complementary Silicon Small Signal Transistors manufactured by the epitaxial Planar process designed for general purpose amplifier applications where a high collector current rating is required.

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

	SYMBOL		UNIT
Collector Base Voltage	V_{CB0}	50	V
Collector Emitter Voltage	V_{CES}	50	V
Collector Emitter Voltage	V_{CEO}	40	V
Emitter Base Voltage	V_{EBO}	5.0	V
Collector Current	I_C	750	mA
Collector Current (PEAK)	I_{CM}	1000	mA
Power Dissipation	P_D	625	mW
Power Dissipation ($T_C=25^\circ\text{C}$)	P_D	1500	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 TO +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
T_{CBO}	$V_{CB}=25\text{V}$		100	nA
I_{CBO}	$V_{CB}=25\text{V}, T_A=100^\circ\text{C}$		15	μA
I_{EBO}	$V_{EB}=5.0\text{V}$		10	μA
BV_{CES}	$I_C=10\mu\text{A}$	50		V
BV_{CEO}	$I_C=10\text{mA}$	40		V
BV_{EBO}	$I_E=10\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		0.75	V
$V_{BE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		1.2	V
$V_{BE(ON)}$	$V_{CE}=2.0\text{V}, I_C=500\text{mA}$	0.60	1.1	V
h_{FE}	$V_{CE}=2.0\text{V}, I_C=2.0\text{mA}$ (2N5814, 2N5815)	60	120	
h_{FE}	$V_{CE}=2.0\text{V}, I_C=2.0\text{mA}$ (2N5816, 2N5817)	100	200	
h_{FE}	$V_{CE}=2.0\text{V}, I_C=2.0\text{mA}$ (2N5818, 2N5819)	150	300	
h_{FE}	$V_{CE}=2.0\text{V}, I_C=500\text{mA}$ (2N5814, 2N5815)	20	-	
h_{FE}	$V_{CE}=2.0\text{V}, I_C=500\text{mA}$ (2N5816, 2N5817)	25	-	
h_{FE}	$V_{CE}=2.0\text{V}, I_C=500\text{mA}$ (2N5818, 2N5819)	25	-	
f_T	$V_{CE}=2.0\text{V}, I_C=50\text{mA}, f=20\text{MHz}$ (2N5814, 2N5815)	100		MHz
f_T	$V_{CE}=2.0\text{V}, I_C=50\text{mA}, f=20\text{MHz}$ (2N5816, 2N5817)	120		MHz
f_T	$V_{CE}=2.0\text{V}, I_C=50\text{mA}, f=20\text{MHz}$ (2N5818, 2N5819)	135		MHz
C_{ob}	$V_{CB}=10\text{V}, f=1.0\text{MHz}$		15	pF
C_{ib}	$V_{EB}=0.5\text{V}, f=1.0\text{MHz}$		55	pF

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