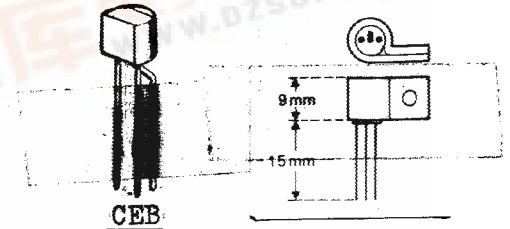


2N5810 THROUGH 2N5819

COMPLEMENTARY SILICON AF MEDIUM POWER TRANSISTORS

THE 2N5810 THROUGH 2N5819 ARE SILICON PLANAR EPITAXIAL TRANSISTORS FOR USE IN AF DRIVERS AND OUTPUTS, AS WELL AS FOR UNIVERSAL APPLICATIONS. THEY ARE SUPPLIED IN TO-92F PLASTIC CASE WITH OPTIONAL X-67 HEAT SINK. THE 2N5810, 2, 4, 6, 8 ARE NPN AND ARE COMPLEMENTARY TO THE PNP 2N5811, 3, 5, 7, 9.

CASE TO-92F WITH X-67
LEAD PREFORMED HEAT SINK

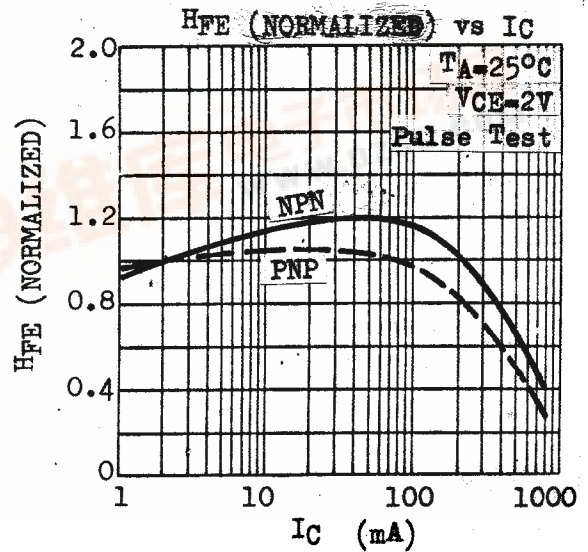
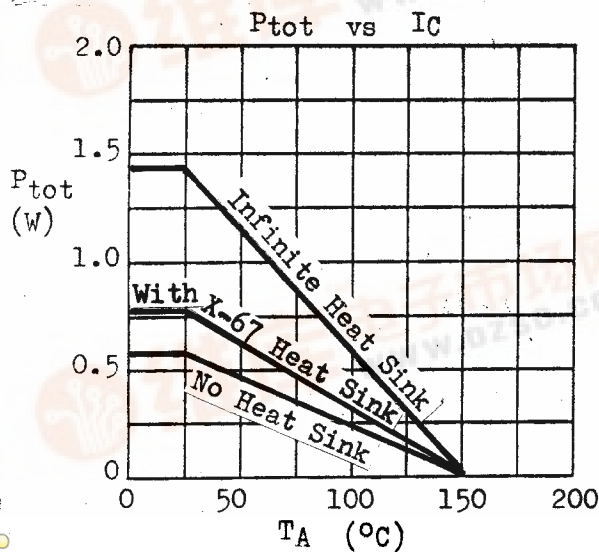


ABSOLUTE MAXIMUM RATINGS For p-n-p devices, voltage and current values are negative.

2N5810, 2(NPN)	2N5814, 6, 8(NPN)
2N5811, 3(PNP)	2N5815, 7, 9(PNP)

Collector-Base Voltage	V_{CB0}	35V	50V
Collector-Emitter Voltage ($V_{BE}=0$)	V_{CES}	35V	50V
Collector-Emitter Voltage ($I_B=0$)	V_{CEO}	25V	40V
Emitter-Base Voltage	V_{EBO}	5V	
Collector Current	I_C	0.75A	
Collector Peak Current ($t \leq 10\text{ms}$)	I_{CM}	1.5A	
Total Power Dissipation @ $T_C \leq 25^\circ\text{C}$	P_{tot}	1.4W	
With X-67 Heat Sink @ $T_A \leq 25^\circ\text{C}$		800mW	
No Heat Sink @ $T_A \leq 25^\circ\text{C}$		625mW	**
Operating Junction & Storage Temperature	T_j, T_{stg}	-55 to 150°C	

** 500mW in JEDEC registration.



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

PARAMETER	SYMBOL	2N5810 thru' 2N5819		UNIT	TEST CONDITIONS
		MIN	MAX		
Collector-Base Breakdown Voltage 2N5810, 1, 2, 3 2N5814, 5, 6, 7, 8, 9	BV _{CES}	35 50		V V	$I_C=0.01\text{mA}$ $V_{BE}=0$
Collector-Emmitter Breakdown Voltage 2N5810, 1, 2, 3 2N5814, 5, 6, 7, 8, 9	LV _{CEO} *	25 40		V V	$I_C=10\text{mA}$ $I_B=0$
Collector Cutoff Current	I _{CBO}		100	nA	$V_{CB}=25\text{V}$ $I_E=0$
			15	μA	$V_{CB}=25\text{V}$ $I_E=0$ $T_A=100^\circ\text{C}$
Emitter Cutoff Current	I _{EBO}		10	μA	$V_{EB}=5\text{V}$ $I_C=0$
Collector-Emmitter Saturation Voltage	V _{CE(sat)} *		0.75	V	$I_C=500\text{mA}$ $I_B=50\text{mA}$
Base-Emmitter Saturation Voltage	V _{BE(sat)} *		1.2	V	$I_C=500\text{mA}$ $I_B=50\text{mA}$
Base-Emmitter Voltage	V _{BE} *	0.6	1.1	V	$I_C=500\text{mA}$ $V_{CE}=2\text{V}$
D.C. Current Gain 2N5810, 1 2N5812, 3 2N5814, 5 2N5816, 7 2N5818, 9	H _{FE} *	60 150 60 100 150	200 500 120 200 300		$I_C=2\text{mA}$ $V_{CE}=2\text{V}$
D.C. Current Gain 2N5810, 1 2N5812, 3 2N5814, 5 2N5816, 7 2N5818, 9	H _{FE} *	45 60 20 25 25			$I_C=500\text{mA}$ $V_{CE}=2\text{V}$
Current Gain-Bandwidth Product 2N5810, 1, 4, 5 2N5816, 7 2N5812, 3, 8, 9	f _T	100 120 135		MHz MHz MHz	$I_C=50\text{mA}$ $V_{CE}=2\text{V}$
Collector-Base Capacitance	C _{ob}		15	pF	$V_{CB}=10\text{V}$ $I_E=0$ $f=1\text{MHz}$
Emmitter-Base Capacitance	C _{ib}		55	pF	$V_{EB}=0.5\text{V}$ $I_C=0$ $f=1\text{MHz}$

* Pulse Test : Pulse Width=0.3ms, Duty Cycle=1%

