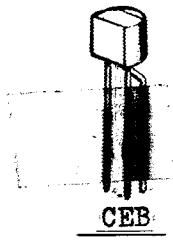
2N5810 THROUGH 2N5819

COMPLEMENTARY SILICON AF MEDIUM POWER TRANSISTORS

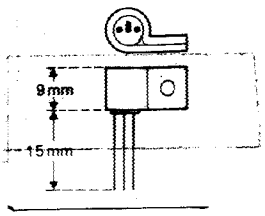
MICROELECTRONICS

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 LEAD PREFORMED

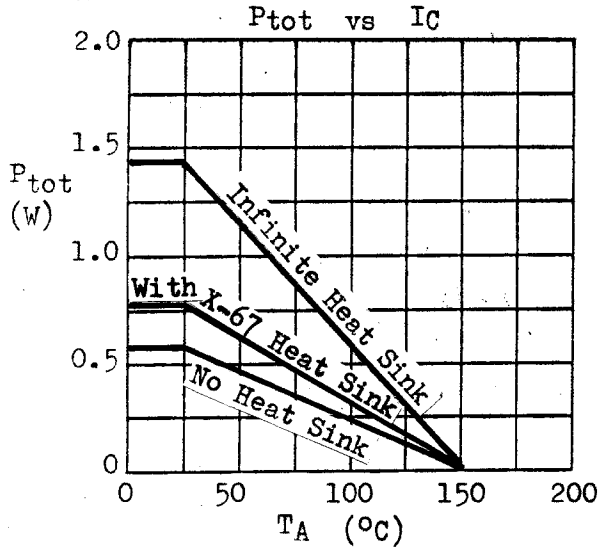


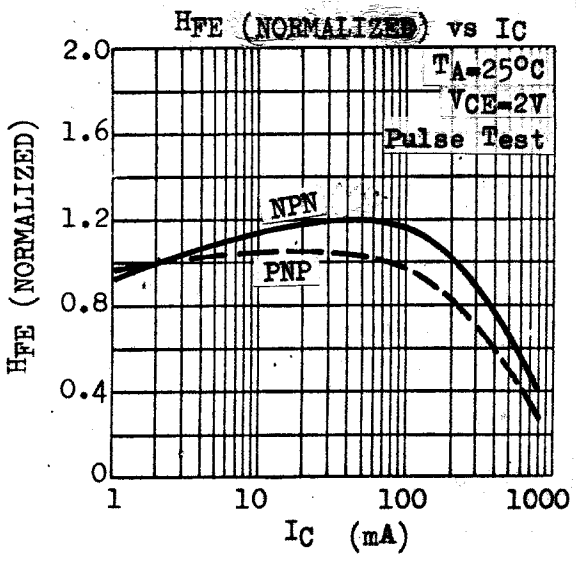
WITH X-67 HEAT SINK



ABSOLUTE MAXIMUM RATINGS (For p-n-p devices, voltage and current values are negative.)		2N5810, 2(NPN) 2N5811, 3(PNP)	2N5814, 6, 8(NPN) 2N5815, 7, 9(PNP)
Collector-Base Voltage	V_{CBO}	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≤10mS)	I_{CM}	1.5A	
Total Power Dissipation @ T_C≤25°C	P_{tot}	1.4W	
With X-67 Heat Sink @ T_A≤25°C		800mW	
No Heat Sink @ T_A≤25°C		625mW **	
Operating Junction & Storage Temperature	T_j, T_{stg}	-55 to 150°C	

** 500mW in JEDEC registration.





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TELEPHONE:- 3-430181-6 ~~3-893363, 3-892423~~
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ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	2N5810 thru 2N5819 MIN	MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	BV_{CES}				I_C=0.01mA V_{BE}=0
2N5810, 1, 2, 3		35		V	
2N5814, 5, 6, 7, 8, 9		50		V	
Collector-Emitter Breakdown Voltage	LV_{CEO} *				I_C=10mA I_B=0
2N5810, 1, 2, 3		25		V	
2N5814, 5, 6, 7, 8, 9		40		V	
Collector Cutoff Current	I_{CBO}		100	nA	V_{CB}=25V I_E=0
			15	μA	V_{CB}=25V I_E=0 T_A=100°C
Emitter Cutoff Current	I_{EBO}		10	μA	V_{EB}=5V IC=0
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$*		0.75	V	I_C=500mA I_B=50mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$*		1.2	V	I_C=500mA I_B=50mA
Base-Emitter Voltage	V_{BE} *	0.6	1.1	V	I_C=500mA V_{CE}=2V
D.C. Current Gain	H_{FE} *				I_C=2mA V_{CE}=2V
2N5810, 1		60	200		
2N5812, 3		150	500		
2N5814, 5		60	120		
2N5816, 7		100	200		
2N5818, 9		150	300		
D.C. Current Gain	H_{FE} *				I_C=500mA V_{CE}=2V
2N5810, 1		45			
2N5812, 3		60			
2N5814, 5		20			
2N5816, 7		25			
2N5818, 9		25			
Current Gain-Bandwidth Product	f_T				I_C=50mA V_{CE}=2V
2N5810, 1, 4, 5		100		MHz	
2N5816, 7		120		MHz	
2N5812, 3, 8, 9		135		MHz	
Collector-Base Capacitance	Cob		15	pF	V_{CB}=10V I_E=0 f=1MHz
Emitter-Base Capacitance	Cib		55	pF	VEB=0.5V IC=0 f=1MHz

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

