

2N5447 THROUGH 2N5450

COMPLEMENTARY SILICON GENERAL PURPOSE AF TRANSISTORS

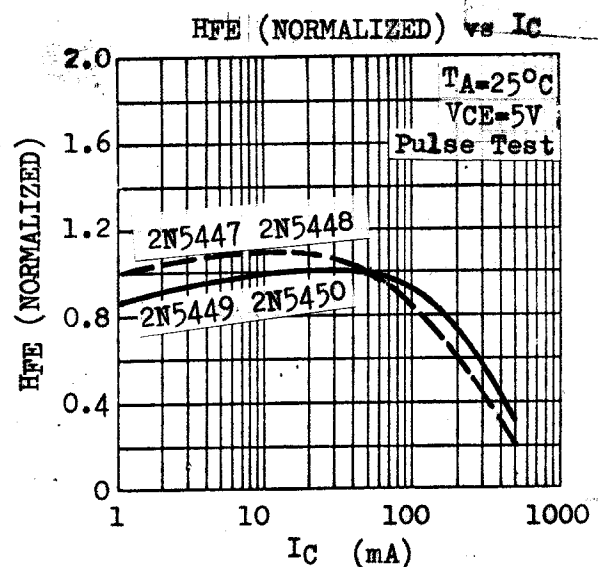
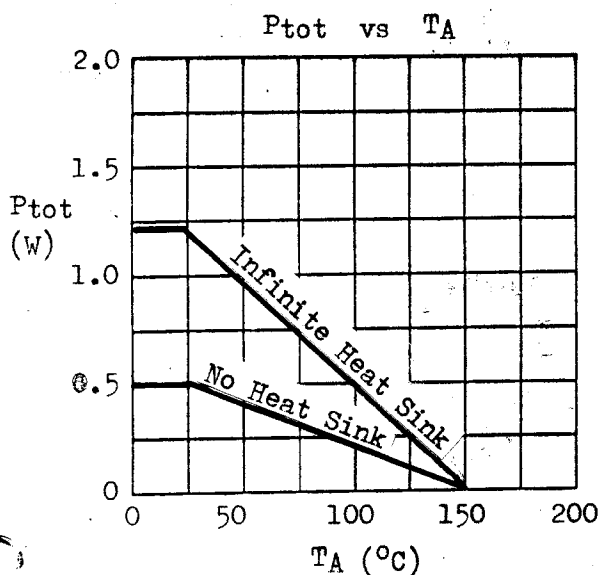
THE 2N5447, 2N5448, 2N5449, 2N5450 ARE SILICON PLANAR EPITAXIAL TRANSISTORS FOR GENERAL PURPOSE MEDIUM POWER AMPLIFIER APPLICATIONS. THE 2N5447, 2N5448 ARE PNP AND ARE COMPLEMENTARY TO THE NPN 2N5449, 2N5450 RESPECTIVELY.

CASE TO-92F



ABSOLUTE MAXIMUM RATINGS For p-n-p devices, voltage and current values are negative.		2N5447(PNP)	2N5448(PNP)	2N5449(NPN) 2N5450(NPN)
Collector-Base Voltage	V_{CB0}	40V	50V	50V
Collector-Emitter Voltage	V_{CE0}	25V	30V	30V
Emitter-Base Voltage	V_{EB0}	5V	5V	5V
Collector Current	I_C	0.2A	0.2A	0.8A
Collector Peak Current ($t \leq 10\text{ms}$)	I_{CM}	0.6A	0.6A	
Total Power Dissipation ($T_C \leq 25^\circ\text{C}$)	P_{tot}		1.2W	
			500mW **	
Operating Junction & Storage Temperature T_j, T_{stg}			-55 to 150°C	

** 360mW in JEDEC registration.



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

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage 2N5447 2N5448, 2N5449, 2N5450	BV_{CBO}	40 50			V V	$I_C=0.1\text{mA}$ $I_E=0$
Collector-Emitter Breakdown Voltage 2N5447 2N5448, 2N5449, 2N5450	$LV_{CEO} *$	25 30			V V	$I_C=10\text{mA}$ $I_B=0$
Emitter-Base Breakdown Voltage	BV_{EBO}	5			V	$I_E=0.1\text{mA}$ $I_C=0$
Collector Cutoff Current	I_{CBO}			100	nA	$V_{CB}=20\text{V}$ $I_E=0$
Emitter Cutoff Current	I_{EBO}			100	nA	$V_{EB}=3\text{V}$ $I_C=0$
Collector-Emitter Saturation Voltage 2N5447, 2N5448 2N5449 2N5450	$V_{CE(sat)} *$			0.25 0.6 0.8	V V V	$I_C=50\text{mA}$ $I_B=5\text{mA}$ $I_C=100\text{mA}$ $I_B=5\text{mA}$ $I_C=100\text{mA}$ $I_B=5\text{mA}$
Base-Emitter Voltage 2N5447, 2N5448 2N5449, 2N5450	$V_{BE} *$	0.6 0.5		1.0 1.0	V V	$I_C=50\text{mA}$ $V_{CE}=5\text{V}$ $I_C=100\text{mA}$ $V_{CE}=2\text{V}$
D.C. Current Gain 2N5447 2N5448 2N5449 2N5450	$H_{FE} *$	60 30 100 50		300 150 300 150		$I_C=50\text{mA}$ $V_{CE}=5\text{V}$ $I_C=50\text{mA}$ $V_{CE}=5\text{V}$ $I_C=50\text{mA}$ $V_{CE}=2\text{V}$ $I_C=50\text{mA}$ $V_{CE}=2\text{V}$
Current Gain-Bandwidth Product 2N5447, 2N5448 2N5449, 2N5450	f_T	100 100			MHz MHz	$I_C=50\text{mA}$ $V_{CE}=5\text{V}$ $I_C=50\text{mA}$ $V_{CE}=2\text{V}$
Collector-Base Capacitance	C_{ob}			12	pF	$V_{CB}=10\text{V}$ $I_E=0$ $f=1\text{MHz}$

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

