

# 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

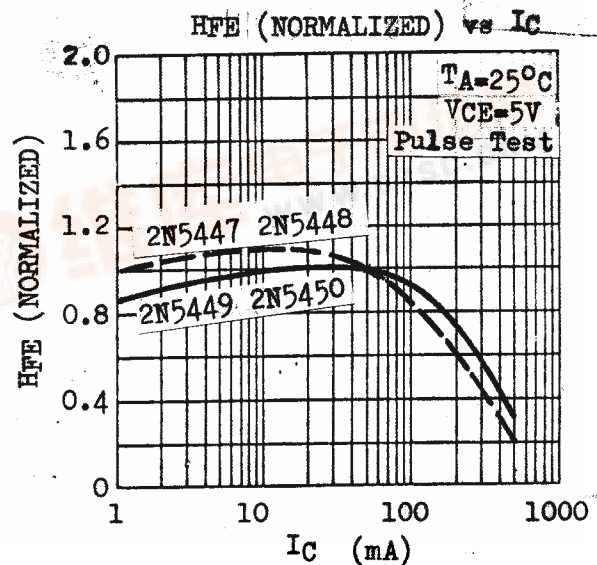
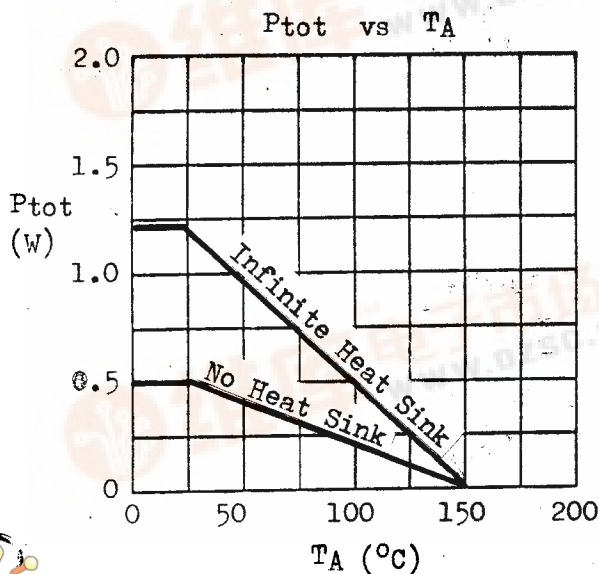


**ABSOLUTE MAXIMUM RATINGS**

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

	2N5447(PNP)	2N5448(PNP)	2N5449(NPN) 2N5450(NPN)
Collector-Base Voltage	VCBO 40V	50V	50V
Collector-Emitter Voltage	VCEO 25V	30V	30V
Emitter-Base Voltage	VEBO 5V	5V	5V
Collector Current	IC 0.2A	0.2A	0.8A
Collector Peak Current (t ≤ 10ms)	ICM 0.6A	0.6A	
Total Power Dissipation (TC ≤ 25°C)		Ptot 1.2W	
(TA ≤ 25°C)		500mW **	
Operating Junction & Storage Temperature	Tj, Tstg	-55 to 150°C	

\*\* 360mW in JEDEC registration.



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

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	BV <sub>CB0</sub>					$I_C=0.1\text{mA}$ $I_E=0$
2N5447		40			V	
2N5448, 2N5449, 2N5450		50			V	
Collector-Emitter Breakdown Voltage	LV <sub>CEO</sub> *					$I_C=10\text{mA}$ $I_B=0$
2N5447		25			V	
2N5448, 2N5449, 2N5450		30			V	
Emitter-Base Breakdown Voltage	BV <sub>EB0</sub>	5			V	$I_E=0.1\text{mA}$ $I_C=0$
Collector Cutoff Current	I <sub>CB0</sub>			100	nA	$V_{CB}=20\text{V}$ $I_E=0$
Emitter Cutoff Current	I <sub>EB0</sub>			100	nA	$V_{EB}=3\text{V}$ $I_C=0$
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub> *					
2N5447, 2N5448				0.25	V	$I_C=50\text{mA}$ $I_B=5\text{mA}$
2N5449				0.6	V	$I_C=100\text{mA}$ $I_B=5\text{mA}$
2N5450				0.8	V	$I_C=100\text{mA}$ $I_B=5\text{mA}$
Base-Emitter Voltage	V <sub>BE</sub> *					
2N5447, 2N5448		0.6		1.0	V	$I_C=50\text{mA}$ $V_{CE}=5\text{V}$
2N5449, 2N5450		0.5		1.0	V	$I_C=100\text{mA}$ $V_{CE}=2\text{V}$
D.C. Current Gain	H <sub>FE</sub> *					
2N5447		60		300		$I_C=50\text{mA}$ $V_{CE}=5\text{V}$
2N5448		30		150		$I_C=50\text{mA}$ $V_{CE}=5\text{V}$
2N5449		100		300		$I_C=50\text{mA}$ $V_{CE}=2\text{V}$
2N5450		50		150		$I_C=50\text{mA}$ $V_{CE}=2\text{V}$
Current Gain-Bandwidth Product	f <sub>T</sub>					
2N5447, 2N5448		100			MHz	$I_C=50\text{mA}$ $V_{CE}=5\text{V}$
2N5449, 2N5450		100			MHz	$I_C=50\text{mA}$ $V_{CE}=2\text{V}$
Collector-Base Capacitance	C <sub>ob</sub>			12	pF	$V_{CB}=10\text{V}$ $I_E=0$ $f=1\text{MHz}$

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

