

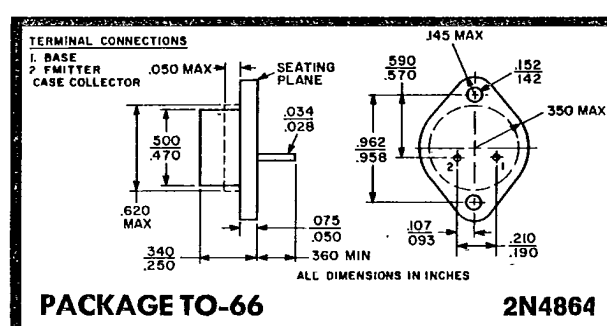
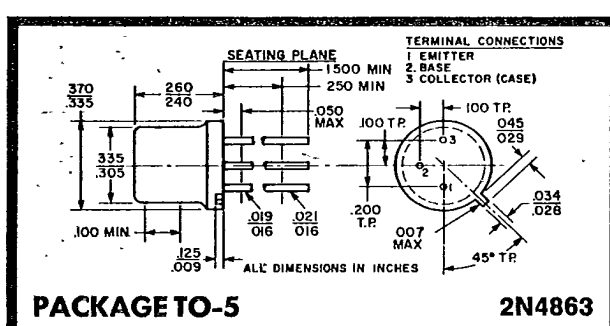
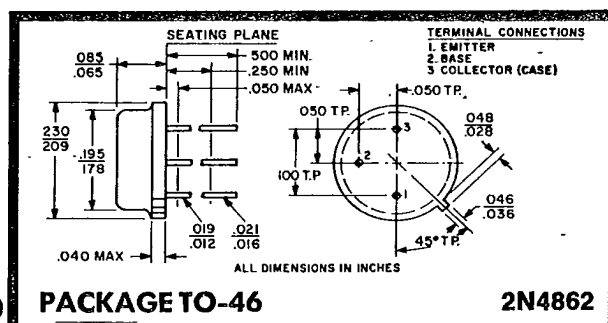


**POWER TRANSISTORS
ENGINEERING BULLETIN**

2N4862/2N4863/2N4864

TYPE 2N4862, 2N4863, 2N4864, 2 AMP NPN SILICON PLANAR POWER TRANSISTORS

LINEAR h_{FE} FROM 50 mA TO 2 AMPS
HIGH FREQUENCY $f_t = 50$ MHz (MINIMUM)
LOW SATURATION VOLTAGE AT MAXIMUM COLLECTOR CURRENT
HIGH VOLTAGE, $BV_{CEO(sus)} = 120$ VOLTS (MINIMUM)



ABSOLUTE MAXIMUM RATING 25°C AMBIENT (unless otherwise noted)

RATING	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	140	Volts
Emitter-Base Voltage	V_{EBO}	8	Volts
Collector-Emitter Voltage	V_{CEO}	120	Volts
Collector Current	I_C	2	Amps
Base Current	I_B	0.5	Amps
Storage Temperature	T_{STG}	-65 to 200	°C
Operating Junction Temperature	T_J	-65 to 200	°C
Dissipation at 100°C Case: 2N4862	P_D	4	Watts
2N4863	P_D	4	Watts
2N4864	P_D	16	Watts
Linear Derating Factor*: 2N4862		40	mW/°C
2N4863		40	mW/°C
2N4864		160	mW/°C

*See Figure No. 1.

PIRGO ELECTRONICS INC.
A SPRAGUE ELECTRIC COMPANY AFFILIATE
 130 CENTRAL AVENUE
 FARMINGDALE, NEW YORK 11735

2240

2 AMP NPN SILICON PLANAR

31510

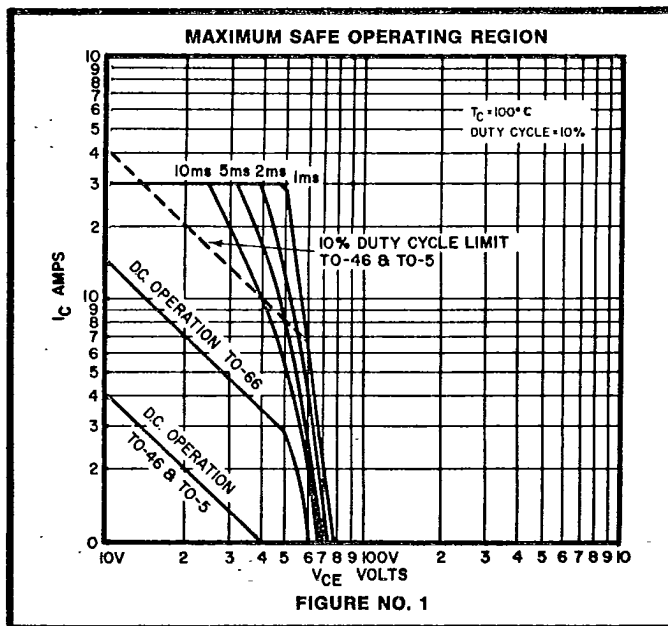
ENGINEERING
BULLETIN

2 AMP NPN SILICON PLANAR

POWER TRANSISTORS

ELECTRICAL CHARACTERISTICS (25°C Case temperature unless otherwise noted)

SYMBOL	CONDITIONS	LIMIT		UNIT
		MIN.	MAX.	
I_{CEX}	$V_{CE} = 60 \text{ V}$, $V_{BE} = -0.5 \text{ V}$, $T_C = 150^\circ\text{C}$		10	μA
I_{CEX}	$V_{CE} = 140 \text{ V}$, $V_{BE} = -0.5 \text{ V}$		10	μA
I_{CBO}	$V_{CB} = 60 \text{ V}$, $I_E = 0$		0.1	μA
I_{EDO}	$V_{EB} = 8 \text{ V}$		10	μA
$BV_{CE0(100)}^*$	$I_B = 0$, $I_C = 10 \text{ mA}$	120		Volts
I_{CEO}	$I_B = 0$, $V_{CE} = 60 \text{ V}$		10	μA
h_{FE}^*	$I_C = 2 \text{ A}$, $V_{CE} = 5 \text{ V}$	15		
	$I_C = 0.5 \text{ A}$, $V_{CE} = 5 \text{ V}$	50	150	
$V_{CE(100)}^*$	$I_C = 2 \text{ A}$, $I_B = 0.2 \text{ A}$		1.5	Volts
	$I_C = 0.5 \text{ A}$, $I_B = 50 \text{ mA}$		0.2	Volts
V_{BE}^*	$I_C = 0.5 \text{ A}$, $V_{CE} = 5 \text{ V}$		1.2	Volts
$ h_{fe} $	$V_{CE} = 10 \text{ V}$, $I_C = 0.1 \text{ A}$, $f = 10 \text{ MHz}$	5		
h_{fe}	$V_{CE} = 5 \text{ V}$, $I_C = 50 \text{ mA}$, $f = 1 \text{ KHz}$	50		
C_{ob}	$V_{CB} = 10 \text{ V}$, $I_C = 0$, $f = 1 \text{ MHz}$		50	pf

*Pulsed measurement: $PW \leq 330 \mu\text{sec}$; $\leq 2\%$ duty cycle.

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