

New Jersey Semi-Conductor Products, Inc.

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 SPRINGFIELD, NEW JERSEY 07081
 U.S.A.

UHF/VHF
 POWER
 TRANSISTORS

2N3866
(2N4427)

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NPN UHF/VHF POWER TRANSISTORS

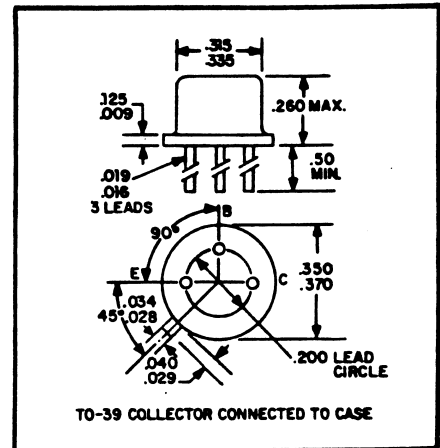
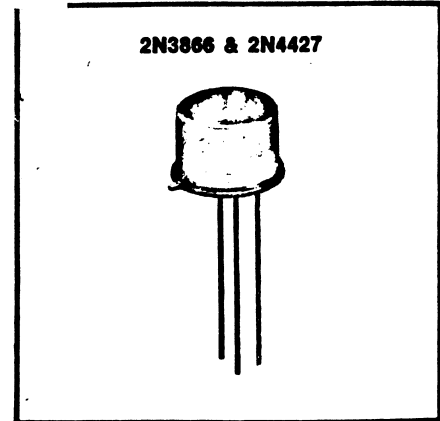
- Complete Large Signal Design Information

2N3866

- For Class A, B or C UHF/VHF Military and Industrial Communications
- 1 Watt output at 400 MHz, 28V and 10 db gain
- Typical f_t 800 MHz

2N4427

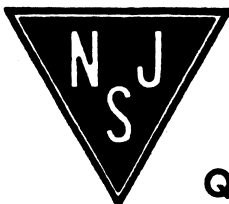
- For Class B or C VHF low voltage applications
- 1 Watt output at 175 MHz, 12V supply and 10 db gain



The ITT 2N3866 and 2N4427 are silicon planar epitaxial NPN power transistors intended for use in UHF/VHF applications.

ABSOLUTE MAXIMUM RATINGS @ 25°C case temperature

CHARACTERISTICS	2N3866	2N4427	UNITS
Collector-to-Base Voltage	55	40	Volts
Collector-to-Emitter Voltage	30	20	Volts
Emitter-to-Base Voltage	3.5	2.0	Volts
Collector Current	0.4	0.4	Amps
Total Power Dissipation	5.0	3.5	Watts
Storage Temperature	-65 to +200	-65 to +200	°C
Junction Temperature	+200	+200	°C



Quality Semi-Conductors

ELECTRICAL CHARACTERISTICS @ 25°C case temperature

SYMBOL		MIN.	TYP.	MAX.	UNITS	CONDITIONS
BV_{CBO}	2N3866 2N4427	55 40			Volts	$I_C = 0.1mA$ $I_C = 0.1mA$
LV_{CEO}	2N3866 2N4427	30 20			Volts	$I_C = 5mA$ $I_C = 5mA$
LV_{CER}	2N3866 2N4427	55 40			Volts	$I_C = 5mA; R_{BE} = 10 \text{ ohms}$ $I_C = 5mA; R_{BE} = 10 \text{ ohms}$
BV_{EBO}	2N3866 2N4427	3.5 2.0			Volts	$I_E = 0.1mA$ $I_E = 0.1mA$
I_{CEO}	2N3866 2N4427			20 20	μA	$V_{CE} = 28V$ $V_{CE} = 12V$
I_{CEX}	2N3866 2N4427			0.1 0.1	mA	$V_{CE} = 55V; V_{BE} = -1.5V$ $V_{CE} = 40V; V_{BE} = -1.5V$
h_{FE}	2N3866 2N4427	10 10		200 200		$V_{CE} = 5V; I_C = .05A$ $V_{CE} = 5V; I_C = 0.1A$
h_{FE}	2N3866 2N4427	5 5				$V_{CE} = 5V; I_C = 0.36A$ $V_{CE} = 5V; I_C = 0.36A$
$V_{CE(sat)}$	2N3866 2N4427			1.0 0.5	Volts	$I_C = 0.1A; I_B = .02A$ $I_C = 0.1A; I_B = .02A$
C_{ob}	2N3866 2N4427			3 4	pF	$V_{CB} = 28V; f = 1MHz$ $V_{CB} = 12V; f = 1MHz$
$ h_{fe} $	2N3866 2N4427	2.5 2.5	4.0			$V_{CE} = 15V; I_C = 50mA; f = 200MHz$ $V_{CE} = 15V; I_C = 50mA; f = 200MHz$
P_{IE}	2N3866 2N4427			0.1 0.1	Watts	$V_{CC} = 28V; P_{OE} = 1Watt; f = 400MHz$ $V_{CC} = 12V; P_{OE} = 1Watt; f = 175MHz$
η	2N3866 2N4427	45 50			%	$V_{CE} = 28V; P_{OE} = 1Watt; f = 400MHz$ $V_{CE} = 12V; P_{OE} = 1Watt; f = 175MHz$

TYPICAL CHARACTERISTICS

