

RF & MICROWAVE TRANSISTORS
130...230MHz FM MOBILE APPLICATIONS

- FREQUENCY
- VOLTAGE
- POWER OUT
- POWER GAIN
- EFFICIENCY
- CLASS C TRANSISTORS
- COMMON EMITTER

2N3926	2N3927
175MHz	175MHz
5.4dB	4.8dB
70%	80%



TO 60 (M137)

ORDER CODE

SD1062
SD1072

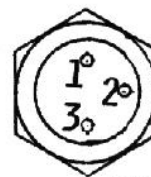
BRANDING

2N3926
2N3927

DESCRIPTION

These types are silicon epitaxial NPN-planar transistors which employ a multi-emitter electrode design. This feature together with a heavily diffused base matrix located between the individual emitters result in high RF current handling capability, high power gain, low base and low output capacitance. This family is intended for Class A, B or C amplifier, oscillator or frequency multiplier circuits.

PIN CONNECTION



S882N3926-01

1 emitter
2 base

3 collector

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$)

Symbol	Parameter	2N3926	2N3927	Unit
V_{CBO}	Collector to Base Voltage	36.0	36.0	V
V_{CEO}	Collector to Emitter Voltage	18.0	18.0	V
V_{EBO}	Emitter to Base Voltage	4.0	4.0	V
$I_{C(max)}$	Continuous Collector Current	1.5	3.0	A
P_D	Total Dissipation at 25°C Stud	11.6	23.2	W
T_j	Junction Temperature	200	200	°C
T_{stg}	Storage Temperature	- 65 to 150	- 65 to 150	°C

		2N3926	2N3927	
$R_{th(j-c)}$	Junction-case Thermal Resistance	15.1	7.54	°C/W

2N3926/2N3927**ELECTRICAL CHARACTERISTICS** ($T_{\text{case}} = 25^{\circ}\text{C}$)**STATIC**

Symbol	Test Conditions	2N3926			2N3927			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	
BV_{CBO}	$I_{\text{C}} = 250\mu\text{A}$ $V_{\text{BE}} = 0$	36			36	$(I_{\text{C}} = 500\mu\text{A})$		V
BV_{CEO}	$I_{\text{C}} = 200\text{mA}$ $I_{\text{B}} = 0$	18			18			V
BV_{EBO}	$I_{\text{E}} = 1\text{mA}$ $I_{\text{C}} = 0$	4			4	$(I_{\text{E}} = 2\text{mA})$		V
I_{CBO}	$V_{\text{CB}} = 15\text{V}$ $I_{\text{E}} = 0$			5			10	mA
h_{FE}	$V_{\text{CE}} = 5\text{V}$ $I_{\text{C}} = 100\text{mA}$	5			5			

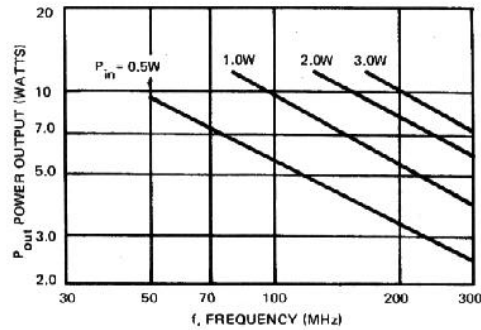
DYNAMIC

Symbol	Test Conditions	2N3926			2N3927			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	
P_{O}	$f = 175\text{MHz}$ $V_{\text{CE}} = 13.6\text{V}$ Class C	7.0			12.0			W
G_{p}	$f = 175\text{MHz}$ $V_{\text{CE}} = 13.6\text{V}$ Class C	5.4			4.8			dB
η_{C}	$f = 175\text{MHz}$ $V_{\text{CB}} = 13.6\text{V}$ Class C	70			80			%
C_{OB}	$V_{\text{CB}} = 13.6\text{V}$ $I_{\text{C}} = 0$ $f = 1\text{MHz}$			20			45	pF

APPLICATION INFORMATION (typical curves)

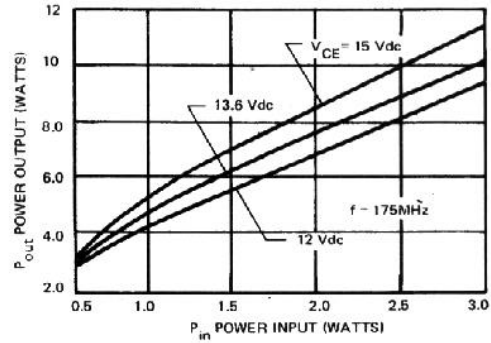
2N3926

POWER OUTPUT VS FREQUENCY



S882N3926-02

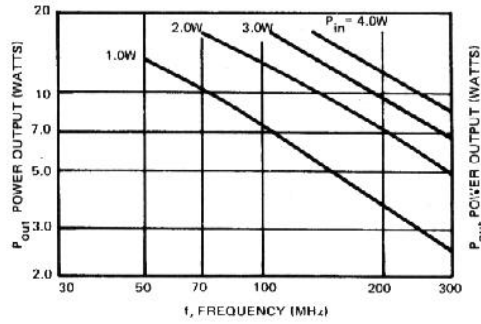
POWER OUTPUT VS POWER INPUT



S882N3926-03

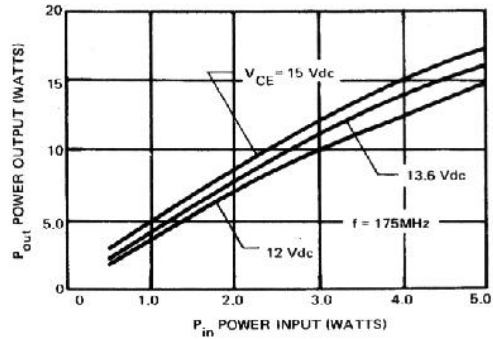
2N3927

POWER OUTPUT VS FREQUENCY



S882N3927-04

POWER OUTPUT VS POWER INPUT

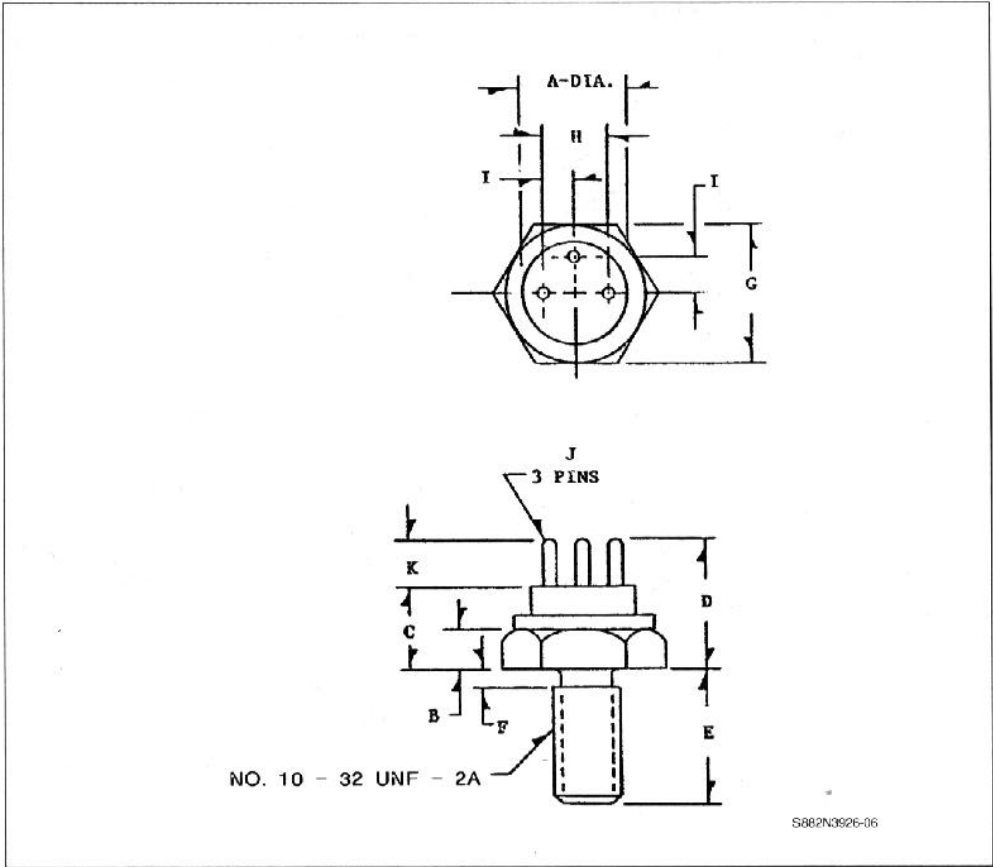


S882N3927-05

2N3926/2N3927

PACKAGE MECHANICAL DATA

TO 60



	Minimum Inches	Maximum Inches
A	.320	.340
B	.110	.135
C	.245	.300
D	.400	.450
E	.420	.455
E	.140	.160

	Minimum Inches	Maximum Inches
F		.078
G	.420	.440
H	.190	.210
I	.095	.105
J	.030	.046
K	.140	.160