RF Products
Microsemi
Progress Powered by Technology
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N3926/2N3927

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	BRANDING
SD1062	2N3926
SD1072	2N3927

PIN CONNECTION

S882N3926-01

1 emitter
2 base
3 collector

DESCRIPTION

These types are silicon epitaxial NPN-planar transitors 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 ouptut capacitance. This family is intended for Class A, B or C amplifier, oscillator or frequency multiplier circuits.

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°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

ELECTRICAL CHARACTERISTICS (T_{case} = 25°C)

STATIC

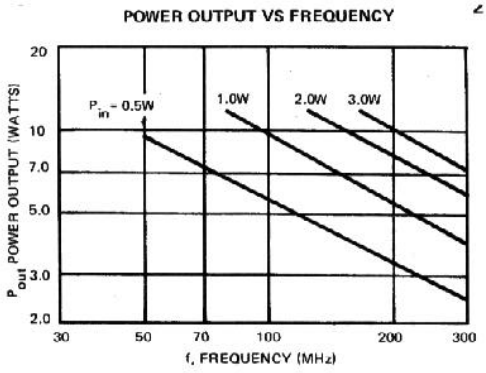
Symbol	Test Conditions		2N3926			2N3927			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
BV_{CBO}	I_C = 250µA	V_{BE} = 0	36			36	(I_C = 500µA)		V
BV_{CEO}	I_C = 200mA	I_B = 0	18			18			V
BV_{EBO}	I_E = 1mA	I_C = 0	4			4	(I_E = 2mA)		V
I_{CBO}	V_{CB} = 15V	I_E = 0			5			10	mA
h_{FE}	V_{CE} = 5V	I_C = 100mA	5			5			

DYNAMIC

Symbol	Test Conditions		2N3926			2N3927			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
P_O	f = 175MHz Class C	V_{CE} = 13.6V	7.0			12.0			W
G_p	f = 175MHz Class C	V_{CE} = 13.6V	5.4			4.8			dB
η_C	f = 175MHz Class C	V_{CB} = 13.6V	70			80			%
C_{OB}	V_{CB} = 13.6V f = 1MHz	I_C = 0			20			45	pF

APPLICATION INFORMATION (typical curves)

2N3926



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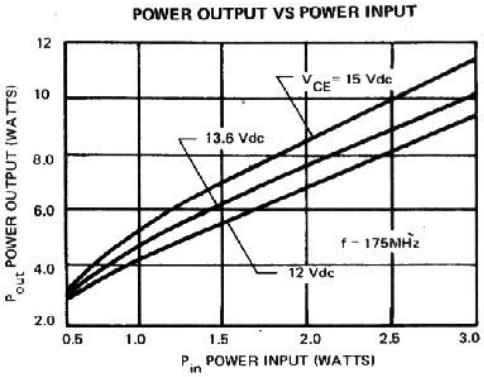

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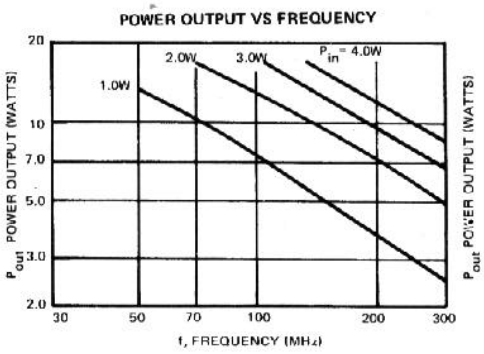
2N3927



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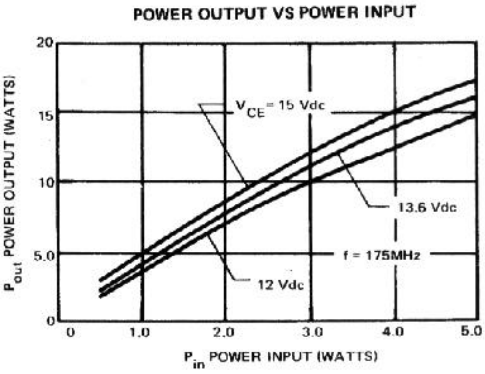
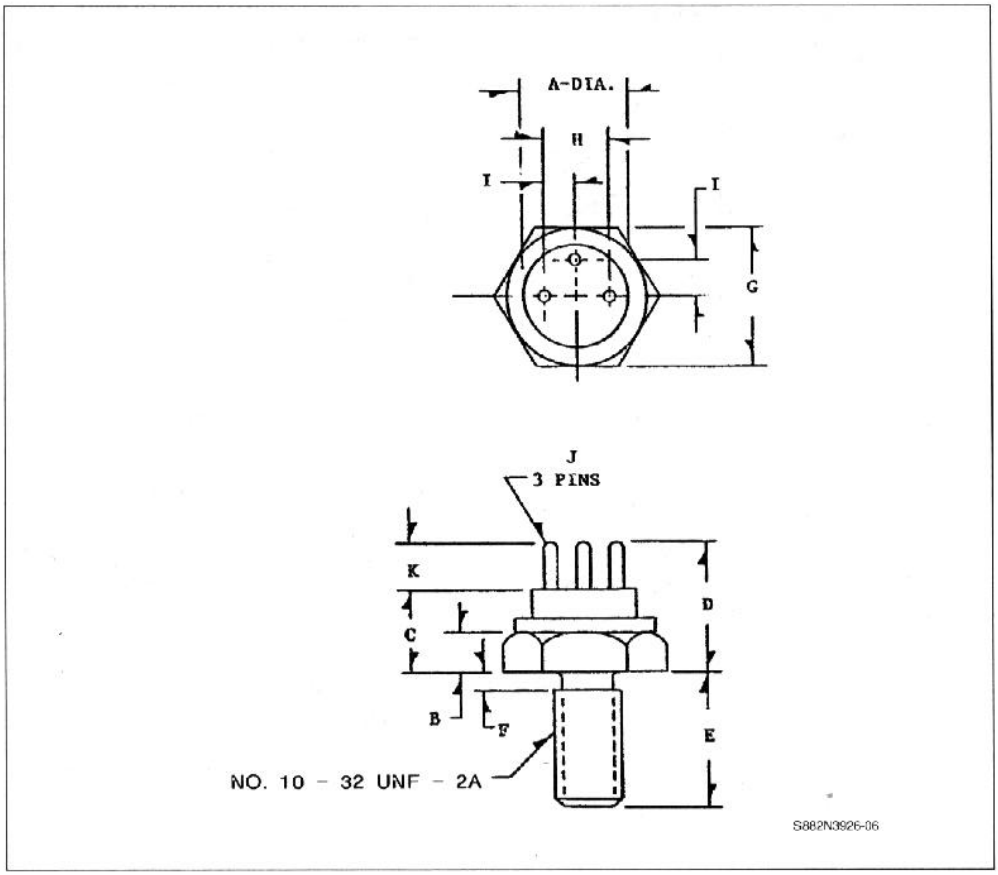


S882N3927-05

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