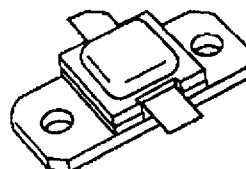


RF & MICROWAVE TRANSISTORS L-BAND AVIONICS APPLICATIONS

PRELIMINARY DATA

- REFRACTORY/GOLD METALLIZATION
- EMITTER SITE BALLASTED
- 10:1 VSWR CAPABILITY
- LOW THERMAL RESISTANCE
- INPUT/OUTPUT MATCHING
- OVERLAY GEOMETRY
- METAL/CERAMIC HERMETIC PACKAGE
- $P_{OUT} = 55 \text{ W MIN. WITH } 9.2 \text{ dB GAIN}$



.400 x .400 2LFL (S036)
hermetically sealed

ORDER CODE

AM1011-055

BRANDING

1011-55

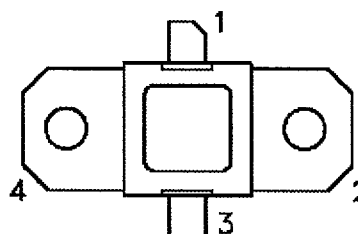
DESCRIPTION

The AM1011-055 device is a high power Class C transistor specifically designed for L-Band Avionics transponder/interrogator output and driver applications.

This device is capable of operation over a wide range of pulse widths, duty cycles, and temperatures and is capable of withstanding 10:1 output VSWR at rated RF conditions. Low RF thermal resistance and computerized automatic wire bonding techniques ensure high reliability and product consistency.

The AM1011-055 is supplied in the AMPAC™ Hermetic Metal/Ceramic package with internal Input/Output matching structures.

PIN CONNECTION



1. Collector

2. Base

3. Emitter

4. Base

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

Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation* ($T_C \leq 100^{\circ}\text{C}$)	91	W
I_C	Device Current*	3.79	A
V_{CC}	Collector-Supply Voltage*	50	V
T_J	Junction Temperature (Pulsed RF Operation)	250	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	- 65 to +200	$^{\circ}\text{C}$

THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance*	1.1	$^{\circ}\text{C/W}$
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*Applies only to rated RF amplifier operation

ELECTRICAL SPECIFICATIONS ($T_{case} = 25^{\circ}C$)**STATIC**

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CBO}	$I_C = 7.5mA$ $I_E = 0mA$	65	—	—	V
BV_{EBO}	$I_E = 3mA$ $I_C = 0mA$	3.5	—	—	V
BV_{CER}	$I_C = 7.5mA$ $R_{BE} = 10\Omega$	65	—	—	V
I_{CES}	$V_{CE} = 50V$	—	—	4	mA
h_{FE}	$V_{CE} = 5V$ $I_C = 1A$	5	—	200	—

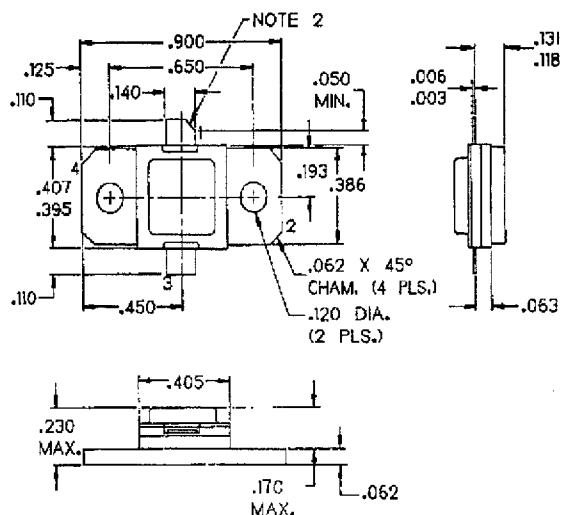
DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	$f = 1090MHz$ $P_{IN} = 6.6W$ $V_{CC} = 50V$	55	—	—	W
η_c	$f = 1090MHz$ $P_{IN} = 6.6W$ $V_{CC} = 50V$	48	—	—	%
G_P	$f = 1090MHz$ $P_{IN} = 6.6W$ $V_{CC} = 50V$	9.2	—	—	dB

Note: Pulse Width = 32 μs
Duty Cycle = 2%

PACKAGE MECHANICAL DATA

Ref.: Dwg. No.: J133102E

**NOTES:**

1. ALL TOLERANCE $\pm .010$ EXCEPT WHERE NOTED;
DIMENSIONS IN INCHES.
2. COLLECTOR LEAD CHAMFER 45° NOM. X $.040$ NOM.