ADVANCED POWER TECHNOLOGY RF®

140 COMMERCE DRIVE
MONTGOMERYVILLE, PA
18936-1013
PHONE: (215) 631-9840
FAX: (215) 631-9855

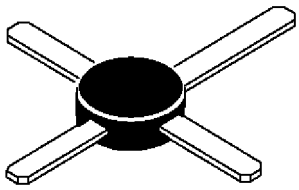
MRF837
MRF837G

* G Denotes RoHS Compliant, Pb Free Terminal Finish

RF & MICROWAVE DISCRETE LOW POWER TRANSISTORS

Features

- Specified @ 12.5V, 870 MHz characteristics
- Output Power = 750 mW
- Minimum Gain = 8.0dB
- Efficiency 60% Typical
- Cost Effective Macro-X package



Macro X

DESCRIPTION: Designed primarily for wideband large signal stages in the 800 MHz and UHF frequency ranges.

ABSOLUTE MAXIMUM RATINGS (Tcase = 25°C)

Symbol	Parameter	Value	Unit
V_{CEO}	Collector-Emitter Voltage	16	V
V_{CBO}	Collector-Base Voltage	30	V
V_{EBO}	Emitter-Base Voltage	3	V
I_C	Collector Current	200	mA
P_D	Total Device Dissipation @ TC = 50ºC	2.5	W
T_{STG}	Storage Junction Temperature Range	-65 to +150	ºC

Thermal Data

$R_{TH(J-C)}$	Thermal Resistance Junction-Case	40	°C/W

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ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions	Value			
		Min.	Typ.	Max.	Unit
BV_{CEO}	I_C = 5.0 mA, I_B = 0	16	-	-	V
BV_{CES}	Ic = 5.0 mA, V_{BE} = 0	30	-	-	V
BV_{EBO}	I_E = 0.1 mA, I_C = 0	3.0	-	-	V
I_{CES}	V_{CE} = 15 V, V_{BE} = 0 V	-	-	0.1	mA
HFE	V_{CE} = 5.0 v, Ic = 50 mA	30	-	200	-

FUNCTIONAL

Symbol	Test Conditions	Value			
		Min.	Typ.	Max.	Unit
G_{PE}	f = 870 MHz, P_{OUT} = 0.75W, V_{CE} = 12.5V	8.0	9.5	-	dB
η_c	f = 870MHz, P_{OUT} = 0.75W, V_{CE} = 12.5V	50	60	-	%
C_{OB}	V_{CB} = 15 V, f = 1.0 MHz	-	-	2.75	pf

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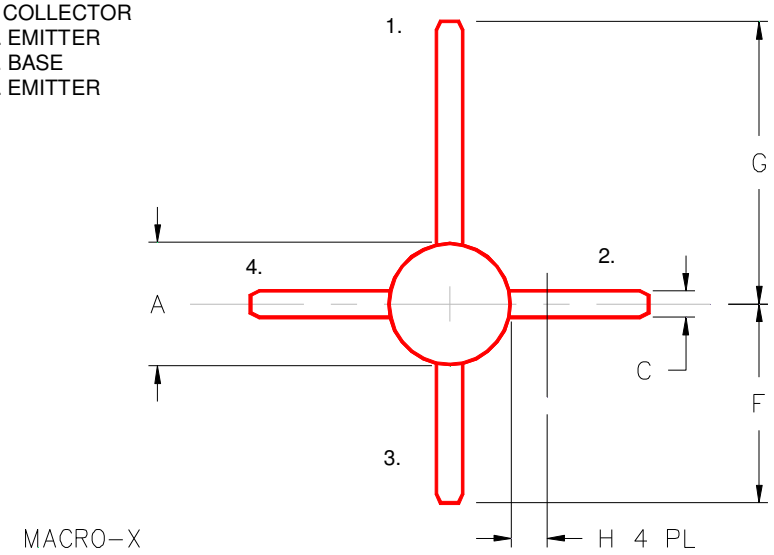
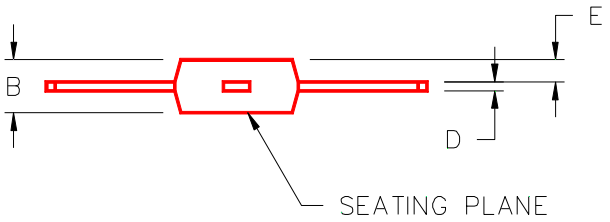
PACKAGE MECHANICAL DATA

PACKAGE STYLE M238

PIN 1. COLLECTOR
2. EMITTER
3. BASE
4. EMITTER



MACRO–X



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.175/4,45	.205/5,21			
B	.075/1,91	.100/2,54			
C	.033/0,84	.039/0,99			
D	.008/0,20	.012/0,31			
E	.030/0,76	.045/1,14			
F	.285/7,24	.320/8,13			
G	.415/10,54	.450/11,43			
H	.065/1,65				