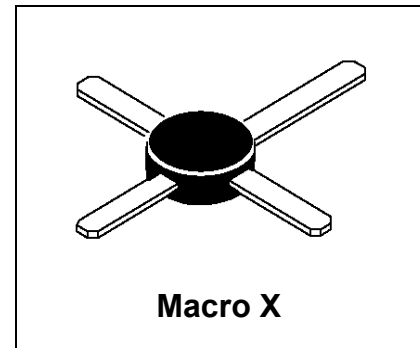


**MRF837**
**RF & MICROWAVE DISCRETE  
LOW POWER TRANSISTORS**
**Features**

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



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

**ABSOLUTE MAXIMUM RATINGS (T<sub>case</sub> = 25°C)**

Symbol	Parameter	Value	Unit
V <sub>CEO</sub>	Collector-Emitter Voltage	16	V
V <sub>CBO</sub>	Collector-Base Voltage	30	V
V <sub>EBO</sub>	Emitter-Base Voltage	3	V
I <sub>c</sub>	Collector Current	200	mA
P <sub>D</sub>	Total Device Dissipation @ TC = 50°C	2.5	W
T <sub>STG</sub>	Storage Junction Temperature Range	-65 to +150	°C

**Thermal Data**

R <sub>TH(J-C)</sub>	Thermal Resistance Junction-Case	40	°C/W
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**ELECTRICAL SPECIFICATIONS (T<sub>case</sub> = 25°C)  
STATIC**

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV <sub>CEO</sub>	I <sub>C</sub> = 5.0 mA, I <sub>B</sub> = 0	16	-	-	V
BV <sub>CES</sub>	I <sub>C</sub> = 5.0 mA, V <sub>BE</sub> = 0	30	-	-	V
BV <sub>EBO</sub>	I <sub>E</sub> = 0.1 mA, I <sub>C</sub> = 0	3.0	-	-	V
I <sub>CES</sub>	V <sub>CE</sub> = 15 V, V <sub>BE</sub> = 0 V	-	-	0.1	mA
HFE	V <sub>CE</sub> = 5.0 v, I <sub>C</sub> = 50 mA	30	-	200	-

**FUNCTIONAL**

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
G <sub>PE</sub>	f = 870 MHz, P <sub>OUT</sub> = 0.75W, V <sub>CE</sub> = 12.5V	8.0	9.5	-	dB
η <sub>C</sub>	f = 870MHz, P <sub>OUT</sub> = 0.75W, V <sub>CE</sub> = 12.5V	50	60	-	%
C <sub>OB</sub>	V <sub>CB</sub> = 15 V, f = 1.0 MHz	-	-	2.75	pf

**PACKAGE MECHANICAL DATA**

