

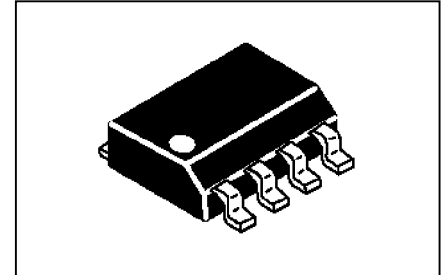
SRF4427
SRF4427G

* G Denotes RoHS Compliant, Pb Free Terminal Finish

RF AND MICROWAVE DISCRETE LOW POWER TRANSISTORS GENERAL RF AMPLIFIER APPLICATIONS

Features

- Low Cost SO-8 Plastic Surface Mount Package.
- S-Parameter Characterization
- Tape and Reel Packaging Options Available
- Maximum Available Gain – 20dB(typ) @ 200MHz



DESCRIPTION:

Designed for general-purpose RF amplifier applications, such as pre-drivers and oscillators.

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C)

Symbol	Parameter	Value	Unit
V _{CEO}	Collector-Emitter Voltage	18	Vdc
V _{CBO}	Collector-Base Voltage	36	Vdc
V _{EBO}	Emitter-Base Voltage	4.0	Vdc
I _C	Collector Current	400	mA

Thermal Data

P _D	Total Device Dissipation @ TC = 25°C	1.5	Watts
	Derate above 25°C	12.5	mW/°C
T _{STG}	Storage Temperature	-65 to + 150	°C
R _{θJA}	Thermal Resistance, Junction to Ambient	125	°C/W

ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)
STATIC (off)

Symbol	Test Conditions	Value			Units
		Min.	Typ.	Max.	
BV_{CEO}	Collector-Emitter Breakdown Voltage (I_C = 10 mA_{dc}, I_B = 0)	18	-	-	V_{dc}
BV_{CES}	Collector-Base Breakdown Voltage (I_C = 5 mA_{dc}, I_E = 0)	36	-	-	V_{dc}
BV_{EBO}	Emitter-Base Breakdown Voltage (I_E = 5 mA_{dc}, I_C = 0)	4	-	-	V_{dc}
I_{CBO}	Collector Cutoff Current (V_{CB} = 12.5 V_{dc})	-	-	800	uA

STATIC (on)

Symbol	Test Conditions	Value			Units
		Min.	Typ.	Max.	
HFE	DC Current Gain (V_{CE} = 5 V_{dc}, I_C = 150 mA_{dc})	20		200	

DYNAMIC

Symbol	Test Conditions	Value			Units
		Min.	Typ.	Max.	
F_{TAU}	Current-Gain Bandwidth Product (I_C = 50 mA_{dc}, V_{CE} = 12 V_{dc}, f = 200 MHz)		1.3		GHz
C_{OB}	Output Capacitance (V_{CB} = 12 V_{dc}, I_E = 0, f = 1.0 MHz)			3.4	GHz

FUNCTIONAL

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
G_{PE}	Power Gain V_{CE} = 12 V_{dc}, f = 175 MHz, Pin = 15 mW	17	18	-	dB
 S₂₁ ²	Insertion Gain V_{CE} = 12 V_{dc}, I_C = 50 mA_{dc}, f = 200 MHz	12	14	-	dB

PACKAGE MECHANICAL DATA

