

### **Features**

- · High Power Gain
- · Low Noise Figure
- · High Cut-off Frequency
- RF Wideband Amplifiers and Oscillators
- · Halogen Free. "Green" Device (Note 1)
- · Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

## Maximum Ratings @ 25°C Unless Otherwise Specified

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 625°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CBO</sub>	25	V
Collector-Emitter Voltage	V <sub>CEO</sub>	18	V
Emitter-Base Voltage	V <sub>EBO</sub>	3	V
Collector Current	I <sub>C</sub>	100	mA
Power Dissipation	P <sub>D</sub>	200	mW

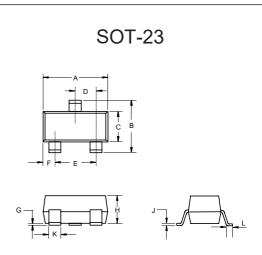
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

### **Internal Structure**



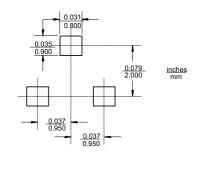
Marking: R257

# NPN RF Transistor



DIMENSIONS					
DIM	INC	HES	MM		NOTE
DIIVI	MIN	MAX	MIN	MAX	INOTE
Α	0.110	0.120	2.80	3.04	
В	0.083	0.104	2.10	2.64	
С	0.047	0.055	1.20	1.40	
D	0.034	0.041	0.85	1.05	
E	0.067	0.083	1.70	2.10	
F	0.018	0.024	0.45	0.60	
G	0.0004	0.006	0.01	0.15	
Н	0.035	0.043	0.90	1.10	
J	0.003	0.007	0.08	0.18	
K	0.014	0.020	0.35	0.51	
L	0.007	0.020	0.20	0.50	

#### **Suggested Solder Pad Layout**





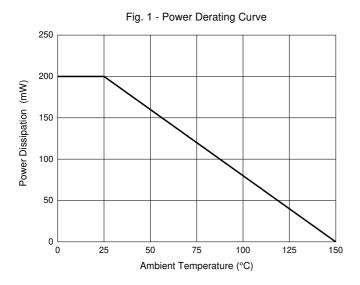
## Electrical Characteristics @ $T_A$ =25°C Unless Otherwise Specified

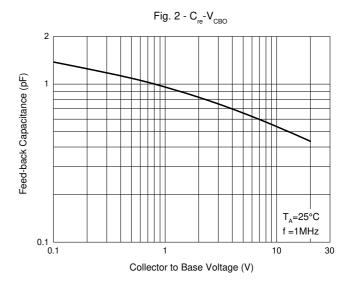
Parameter	Symbol	Min	Тур	Max	Units	Conditions
Collector-Base Cutoff Current	I <sub>CBO</sub>			1	μA	$V_{CB}$ =20V, $I_E$ =0
Emitter-Base Cutoff Current	I <sub>EBO</sub>			1	μA	$V_{EB}$ =3 $V$ , $I_{C}$ =0
DC Current Gain*	h <sub>FE</sub>	130		300		V <sub>CE</sub> =10V, I <sub>C</sub> =20mA
Transition Frequency	f <sub>T</sub>		6		GHz	V <sub>CE</sub> =10V, I <sub>C</sub> =20mA
Power Gain	Gp		10		dB	V <sub>CE</sub> =10V, I <sub>C</sub> =20mA, f=1GHz

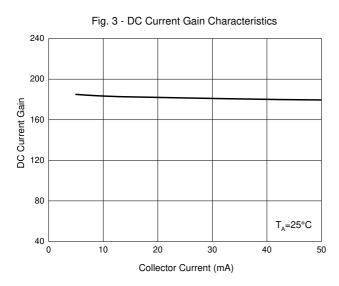
<sup>\*</sup>Pulse Width ≤ 380µs, Duty Cycle≤2.0%



## **Curve Characteristics**









## **Ordering Information**

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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