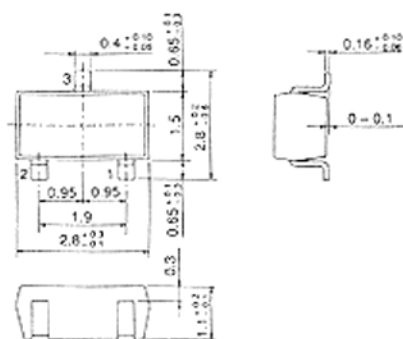


2SC3513

SILICON NPN EPITAXIAL
UHF/VHF WIDE BAND AMPLIFIER



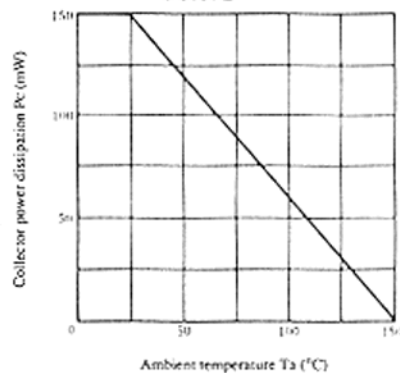
(MPAK)

1. Emitter
 2. Base
 3. Collector
- (Dimensions in mm)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SC3513	Unit
Collector to base voltage	V _{CB0}	15	V
Collector to emitter voltage	V _{CE0}	11	V
Emitter to base voltage	V _{EB0}	2	V
Collector current	I _C	50	mA
Collector power dissipation	P _C	150	mW
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

MAXIMUM COLLECTOR DISSIPATION CURVE



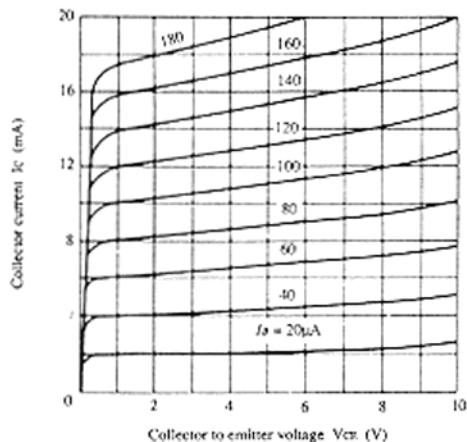
■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage	V _{(BR)CBO}	I _C = 10μA, I _E = 0	15	27	—	V
Collector cutoff current	I _{CEO}	V _{CE} = 10V, R _{BE} = ∞	—	—	1	μA
Emitter cutoff current	I _{EB0}	V _{EB} = 1V, I _C = 0	—	—	1	μA
Collector cutoff current	I _{CBO}	V _{CB} = 12V, I _E = 0	—	—	1	μA
DC current transfer ratio	h _{FE}	V _{CE} = 5V, I _C = 20mA	50	120	250	
Collector output capacitance	C _{ob}	V _{CB} = 5V, I _E = 0, f = 1MHz	—	1.0	1.5	pF
Gain bandwidth product	f _r	V _{CE} = 5V, I _C = 20mA	—	6.0	—	GHz
Power gain	PG	V _{CE} = 5V, I _C = 20mA, f = 900MHz	—	10	—	dB
Noise figure	NF	V _{CE} = 5V, I _C = 5mA, f = 900MHz	—	1.6	—	dB

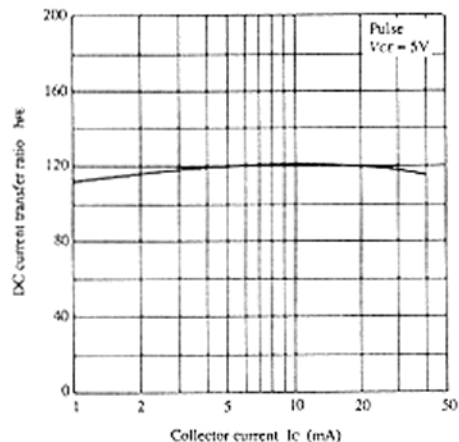
* Marking is "IS-"

2SC3513

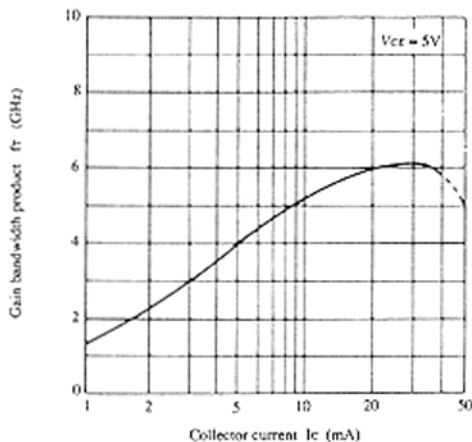
TYPICAL OUTPUT CHARACTERISTICS



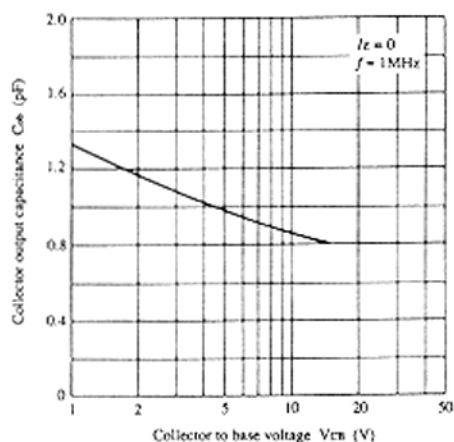
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



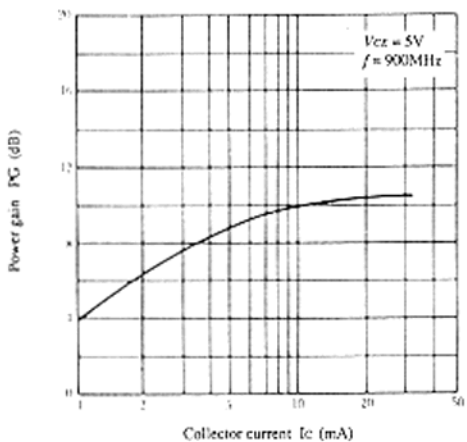
GAIN BANDWIDTH PRODUCT VS. COLLECTOR CURRENT



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE



POWER GAIN VS. COLLECTOR CURRENT



NOISE FIGURE VS. COLLECTOR CURRENT

