

DESCRIPTION

2SC5728 is a ultra super mini package resin sealed silicon NPN epitaxial transistor, It is designed for high frequency application.

FEATURE

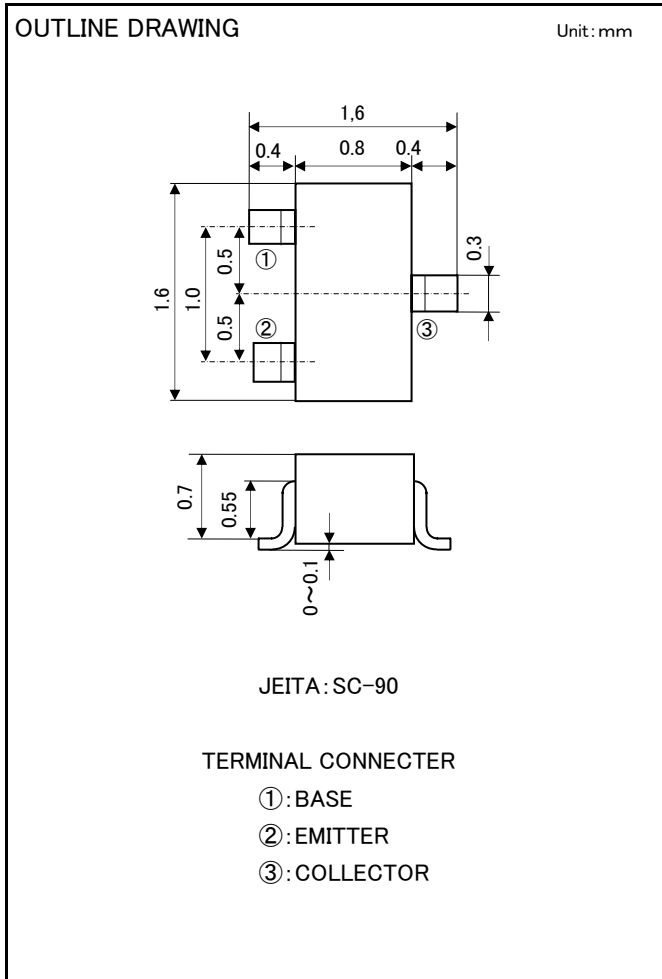
- High gain bandwidth product.
 $f_T=10.0\text{GHz}$
- High gain, low noise.
- Can operate at low voltage.
- Super mini package for easy mounting

APPLICATION

For TV tuners, high frequency amplifier , cellular phone system.

MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector to Base voltage	15	V
V_{CEO}	Collector to Emitter voltage	6	V
V_{EBO}	Emitter to Base voltage	1.5	V
I_O	Collector current	50	mA
P_c	Collector dissipation	125	mW
T_j	Junction temperature	+125	$^\circ\text{C}$
T_{stg}	Storage temperature	-55~+125	$^\circ\text{C}$



ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Test conditions	Limits			Unit
			Min	Typ	Max	
Collector cut off current	ICBO	$V_{CB}=10\text{V}, I_E=0\text{mA}$	-	-	1.0	μA
Emitter cut off current	IEBO	$V_{EB}=1\text{V}, I_C=0\text{mA}$	-	-	1.0	μA
DC forward current gain	hFE	$V_{CE}=3\text{V}, I_C=10\text{mA}$	30	-	250	
Gain bandwidth product	f_T	$V_{CE}=3\text{V}, I_E=10\text{mA}$	-	10.0	-	GHz
Collector output capacitance	Cob	$V_{CB}=3\text{V}, I_E=0\text{mA}, f=1\text{MHz}$	-	0.7	-	pF
Insertion power gain	$ S_{21} ^2$	$V_{CE}=3\text{V}, I_C=10\text{mA}, f=1\text{GHz}$	10.0	13.0	-	dB
Noise figure	NF	$V_{CE}=3\text{V}, I_C=5\text{mA}, f=1\text{GHz}$	-	1.4	-	dB



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