

DESCRIPTION

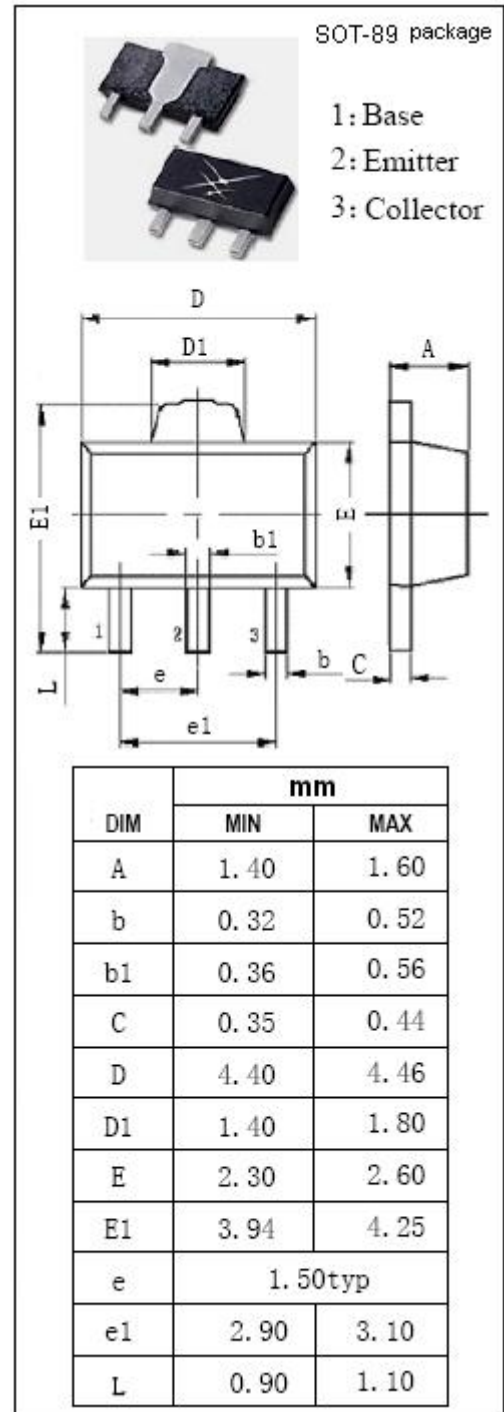
- Low Distortion at Low Supply Voltage.
 IM_2 - 55 dB TYP., IM_3 - 76 dB TYP.
 @ $V_{CE} = 5\text{ V}$, $I_C = 50\text{ mA}$, $V_O = 105\text{ dB } \mu / 75\ \Omega$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for low distortion ,low noise RF amplifier operating with low supply voltage ($V_{CE} = 5\text{ V}$).

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	25	V
V_{CEO}	Collector-Emitter Voltage	12	V
V_{EBO}	Emitter-Base Voltage	2.5	V
I_C	Collector Current-Continuous	0.15	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	1.8	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN RF Transistor
2SC4703
ELECTRICAL CHARACTERISTICS

 T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I _{CB0}	Collector Cutoff Current	V _{CB} = 20V; I _E = 0			1.5	μ A
I _{EB0}	Emitter Cutoff Current	V _{EB} = 2V; I _C = 0			1.5	μ A
h _{FE}	DC Current Gain	I _C = 5mA ; V _{CE} = 5V	50		250	
f _T	Current-Gain—Bandwidth Product	I _C = 5mA ; V _{CE} = 5V		6.0		GHz
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 5V;f= 1.0MHz		1.5	2.5	pF
S _{21e} ²	Insertion Power Gain	I _C = 50mA ; V _{CE} = 5V;f= 1.0GHz	6.5	8.3		dB
S _{21e} ²	Insertion Power Gain	I _C = 20mA ; V _{CE} = 10V;f= 1.0GHz		8.5		dB
NF	Noise Figure	I _C = 50mA ; V _{CE} = 5V;f= 1.0GHz		2.3	3.5	dB
IM ₂	2nd Intermodulation Distortion	V _{CE} = 5V, I _C = 50mA, V _O = 105 dB μ V/75 Ω, f =190 MHz – 90 MHz		-55		dB
		V _{CE} = 10V, I _C = 50mA, V _O = 105 dB μ V/75 Ω, f =190 MHz – 90 MHz		-63		
IM ₃	3rd Intermodulation Distortion	V _{CE} = 5V, I _C = 50mA, V _O = 105 dB μ V/75 Ω, f =2× 190 MHz – 200 MHz		-76		dB
		V _{CE} = 10V, I _C = 50mA, V _O = 105 dB μ V/75 Ω, f =2× 190 MHz – 200 MHz		-81		

◆ h_{FE} Classification

Class	SH	SF	SE
Marking	SH	SF	SE
h _{FE}	50-100	80-160	125-250

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