

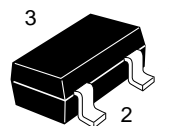
## 2SC4591

### Silicon NPN Epitaxial UHF/VHF Wide Band Amplifier

**Table 1 Absolute Maximum Ratings**  
( $T_a = 25^\circ\text{C}$ )

Item	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	15	V
Collector to emitter voltage	$V_{CEO}$	9	V
Emitter to base voltage	$V_{EBO}$	1.5	V
Collector current	$I_C$	50	mA
Collector power dissipation	$P_C$	150	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

MPAK



1. Emitter
2. Base
3. Collector

**Table 2 Electrical Characteristics** ( $T_a = 25^\circ\text{C}$ )

Item	Symbol	Min	Typ	Max	Unit	Test condition
Collector to base breakdown voltage	$V_{(BR)CBO}$	15	—	—	V	$I_C = 10 \mu\text{A}$ , $I_E = 0$
Collector cutoff current	$I_{CBO}$	—	—	1	$\mu\text{A}$	$V_{CB} = 12 \text{ V}$ , $I_E = 0$
	$I_{CEO}$	—	—	1	mA	$V_{CE} = 9 \text{ V}$ , $R_{BE} = \infty$
Emitter cutoff current	$I_{EBO}$	—	—	10	$\mu\text{A}$	$V_{EB} = 1.5 \text{ V}$ , $I_C = 0$
DC current transfer ratio	$h_{FE}$	40	120	250	—	$V_{CE} = 5 \text{ V}$ , $I_C = 20 \text{ mA}$
Collector output capacitance	$C_{ob}$	—	0.8	1.5	pF	$V_{CB} = 5 \text{ V}$ , $I_E = 0$ , $f = 1 \text{ MHz}$
Gain bandwidth product	$f_T$	6.5	9.0	—	GHz	$V_{CE} = 5 \text{ V}$ , $I_C = 20 \text{ mA}$
Power gain	PG	9.5	12.5	—	dB	$V_{CE} = 5 \text{ V}$ , $I_C = 20 \text{ mA}$ , $f = 900 \text{ MHz}$
Noise figure	NF	—	1.2	2.5	dB	$V_{CE} = 5 \text{ V}$ , $I_C = 5 \text{ mA}$ , $f = 900 \text{ MHz}$

- See characteristic curve of 2SC4592
- Marking is "XM-".