



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



2SC5019

Silicon NPN epitaxial planar type

For UHF band low-noise amplification

■ Features

- Low noise figure NF
- High maximum unilateral power gain G_{UM}
- High transition frequency f_T
- Mini Power type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

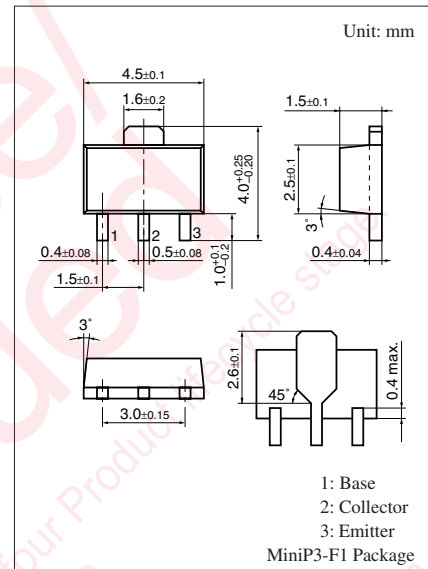
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	15	V
Collector-emitter voltage (Base open)	V_{CEO}	10	V
Emitter-base voltage (Collector open)	V_{EBO}	2	V
Collector current	I_C	80	mA
Collector power dissipation *	P_C	1	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Note) *: Copper plate at the collector is more than 1 cm^2 in area, 1.7 mm in thickness
Absolute maximum rating without heat sink for P_C is 0.5 W

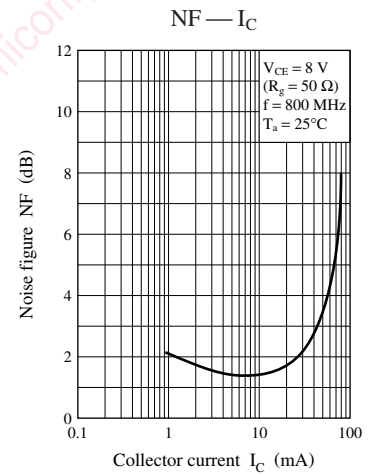
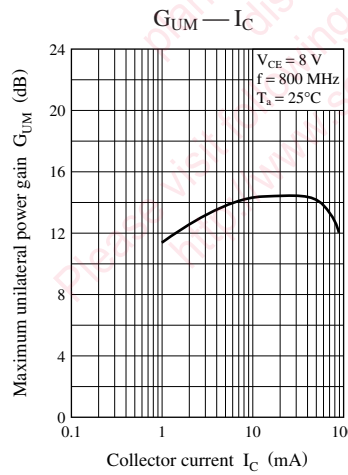
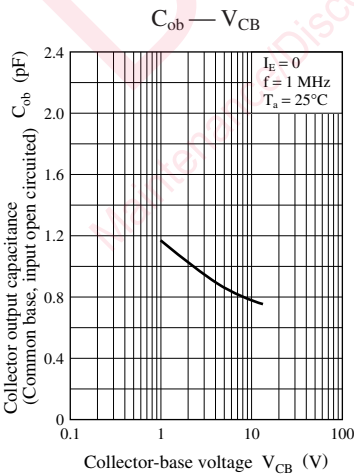
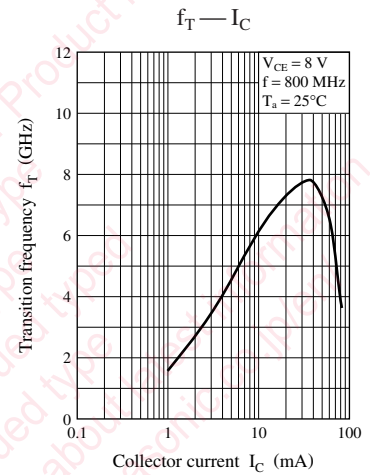
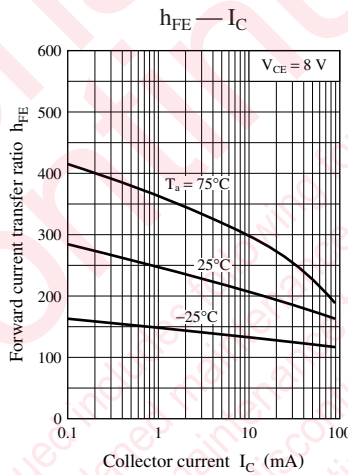
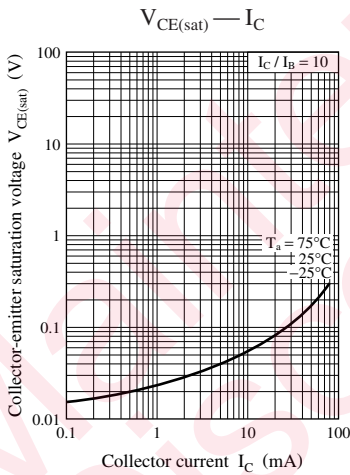
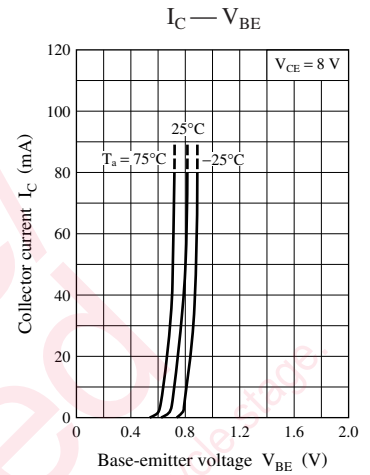
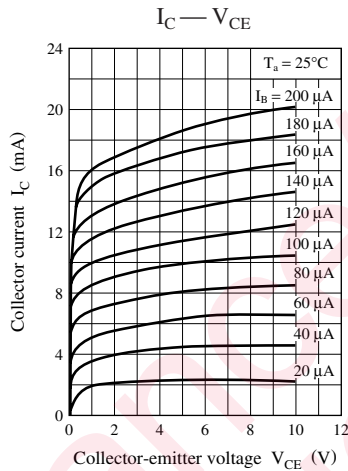
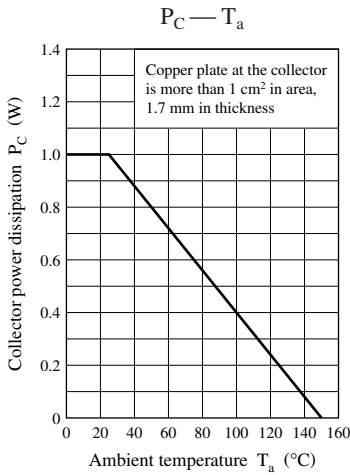
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 10\ \mu\text{A}, I_E = 0$	15			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 100\ \mu\text{A}, I_B = 0$	10			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 10\ \text{V}, I_E = 0$			1	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = 2\ \text{V}, I_C = 0$			1	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = 8\ \text{V}, I_C = 20\ \text{mA}$	80		250	—
Transition frequency	f_T	$V_{CE} = 8\ \text{V}, I_C = 20\ \text{mA}, f = 0.8\ \text{GHz}$	5	6		GHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = 10\ \text{V}, I_E = 0, f = 1\ \text{MHz}$		0.9	1.2	pF
Forward transfer gain	$ S_{21e} ^2$	$V_{CE} = 8\ \text{V}, I_C = 20\ \text{mA}, f = 0.8\ \text{GHz}$	7.5	10.0		dB
Maximum unilateral power gain	G_{UM}	$V_{CE} = 8\ \text{V}, I_C = 20\ \text{mA}, f = 0.8\ \text{GHz}$		11.5		dB
Noise figure	NF	$V_{CE} = 8\ \text{V}, I_C = 7\ \text{mA}, f = 0.8\ \text{GHz}$		1.7		dB

Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.



Marking Symbol: 1W



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