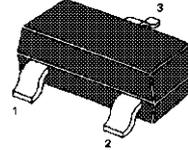


MMBT9013G / MMBT9013H

NPN Silicon Epitaxial Planar Transistors
for switching and amplifier applications.

As complementary types the PNP transistor
MMBT9012G and MMBT9012H are recommended.

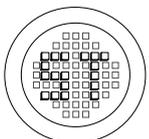


1. Base 2. Emitter 3. Collector

SOT-23 Plastic Package

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

	Symbol	Value	Unit
Collector Emitter Voltage	V_{CEO}	30	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	500	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_s	-55 to +150	$^\circ\text{C}$



®

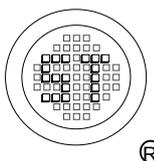
РАДИОТЕХ

Тел.: (495) 795-0805
Факс: (495) 234-1603
Эл. почта: info@rct.ru
Веб: www.rct.ru

MMBT9013G / MMBT9013H

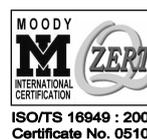
Characteristics at $T_{amb}=25\text{ }^{\circ}\text{C}$

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE}=1\text{V}$, $I_C=100\text{mA}$	MMBT9013G h_{FE}	100	-	250	-
	MMBT9013H h_{FE}	160	-	400	-
	h_{FE}	40	-	-	-
Collector Cutoff Current at $V_{CB}=31\text{V}$	I_{CBO}	-	-	100	nA
Collector Emitter Breakdown Voltage at $I_C=1\text{mA}$	$V_{(BR)CEO}$	30	-	-	V
Emitter Base Cutoff Current at $V_{EB}=5.1\text{V}$	I_{EBO}	-	-	100	nA
Collector Saturation Voltage at $I_C=500\text{mA}$, $I_B=20\text{mA}$	$V_{CE(sat)}$	-	-	0.5	V
Base Saturation Voltage at $I_C=500\text{mA}$, $I_B=20\text{mA}$	$V_{BE(sat)}$	-	-	1.2	V
Base Emitter Voltage at $V_{CE}=1\text{V}$, $I_C=50\text{mA}$	V_{BE}	0.6	-	0.75	V
Gain Bandwidth Product at $V_{CE}=5\text{V}$, $I_C=10\text{mA}$, $f=50\text{MHz}$	f_T	-	100	-	MHz
Collector Base Capacitance at $V_{CB}=10\text{V}$, $f=1\text{MHz}$	C_{CBO}	-	12	-	pF
Thermal Resistance Junction to Ambient	R_{thA}	-	-	200 ¹⁾	K/W
1) Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case					



SEMTECH ELECTRONICS LTD.

(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001
Certificate No. 7116



ISO 9001 : 2000
Certificate No. 550-1900-AL-REG-204

Dated : 20/10/2005