



Micro Commercial Components



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MMS9014-L MMS9014-H

NPN Silicon Plastic-Encapsulate Transistor

Features

- Halogen free available upon request by adding suffix "-HF"
- SOT-23 Plastic-Encapsulate Transistors
- Capable of 0.2Watts($T_{amb}=25^{\circ}C$) of Power Dissipation.
- Collector-current 0.1A
- Collector-base Voltage 50V
- Operating and storage junction temperature range: $-55^{\circ}C$ to $+150^{\circ}C$
- Marking : J6
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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OFF CHARACTERISTICS

$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=100\mu A$, $I_E=0$)	50	---	Vdc
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=0.1mA$, $I_B=0$)	45	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E=100\mu A$, $I_C=0$)	5.0	---	Vdc
I_{CBO}	Collector Cutoff Current ($V_{CB}=50Vdc$, $I_E=0$)	---	0.1	μA
I_{CEO}	Collector Cutoff Current ($V_{CE}=35Vdc$, $I_B=0$)	---	0.1	μA
I_{EBO}	Emitter Cutoff Current ($V_{EB}=3.0Vdc$, $I_C=0$)	---	0.1	μA

ON CHARACTERISTICS

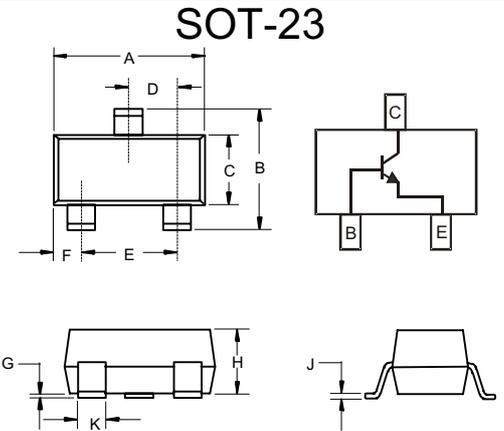
$h_{FE(1)}$	DC Current Gain ($I_C=1.0mA$, $V_{CE}=5.0Vdc$)	200	1000	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=100mA$, $I_B=5.0mA$)	---	0.3	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C=100mA$, $I_B=5.0mA$)	---	1.0	Vdc

SMALL-SIGNAL CHARACTERISTICS

f_T	Transistor Frequency ($I_C=10mA$, $V_{CE}=5.0Vdc$, $f=30MHz$)	150	---	MHz
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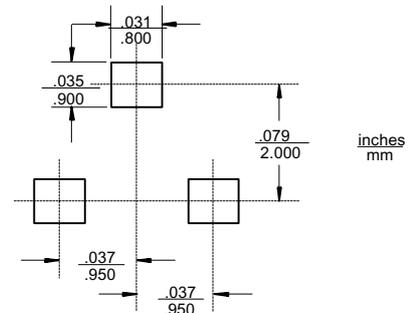
CLASSIFICATION OF h_{FE}

Rank	L	H
Range	200~450	450~1000



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout





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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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