General Purpose Transistors

PNP Silicon

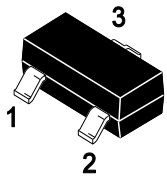
S9012 Series

S-S9012 Series

FEATURE

We declare that the material of product compliance with RoHS requirements.

S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



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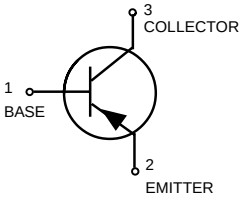
DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
S9012P S-S9012P	12P	3000/Tape&Reel
S9012Q S-S9012Q	12Q	3000/Tape&Reel
S9012R S-S9012R	12R	3000/Tape&Reel
S9012S S-S9012S	12S	3000/Tape&Reel

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	-20	V
Collector-Base Voltage	V_{CBO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector current-continuoun	IC	-500	mAdc



THERMAL CHARATEERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board, (1) T_A=25°C Derate above 25°C	P_D	 225 1.8	 mW mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation Alumina Substrate, (2) TA=25 °C Derate above 25°C	P_D	 300 2.4	 mW mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	°C/W
Junction and Storage Temperature	Tj ,Tstg	-55 to +150	°C

1. FR–5 = 1.0 x 0.75 x 0.062 in.
2. Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage (IC=-1.0mA)	V(BR)CEO	-20	-	-	V
Emitter-Base Breakdown Voltage (IE=-100μA)	V(BR)EBO	-5	-	-	V
Collector-Base Breakdown Voltage (IC=-100μ A)	V(BR)CBO	-40	-	-	V
Collector Cutoff Current (VCB=-35V)	I CBO	-	-	-150	nA
Emitter Cutoff Current (VBE=-4V)	IEBO			-150	nA

ON CHARACTERISTICS

DC Current Gain (I_C=-50mA, V_{CE}=-1V)	H_{fe}	100	-	600	
Collector-Emitter Saturation Voltage (I_C=-500mA, I_B=-50mA)	$V_{CE(S)}$	-	-	-0.6	V

NOTE:

*	P	Q	R	S
H_{FE}	100~200	150~300	200~400	300~600

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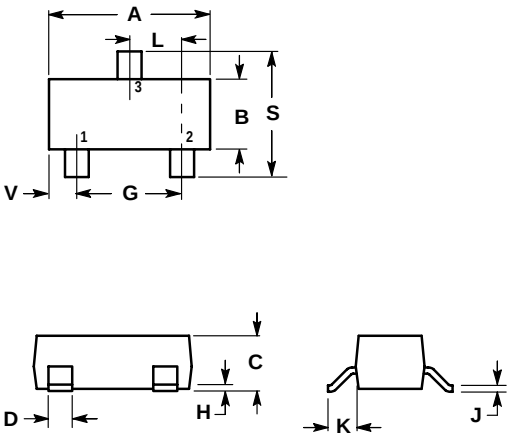

NOTES:

1. CONTROLLING DIMENSION: MILLIMETERS
2. LEAD THICKNESS SPECIFIED PER L / F DRAWING WITH SOLDER PLATING.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0180	0.0236	0.45	0.60
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.0984	2.10	2.50
V	0.0177	0.0236	0.45	0.60

PIN 1. BASE
2. EMITTER
3. COLLECTOR