

MPS2923 thru MPS2925 (SILICON)

NPN SILICON ANNULAR TRANSISTOR

... designed for use in medium-speed general-purpose amplifier and oscillator applications.

- Collector-Emitter Breakdown Voltage —
BVCEO = 25 Vdc
- Small Signal Current Gain —
hfe = 90-180 MPS2923
150-300 MPS2924
235-470 MPS2925

NPN SILICON SWITCHING TRANSISTOR



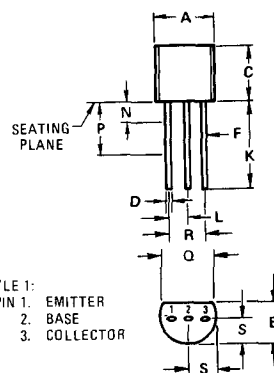
MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	VCEO	25	Vdc
Collector-Base Voltage	VCB	25	Vdc
Emitter-Base Voltage	VEB	5.0	Vdc
Collector Current — Continuous	IC	100	mA dc
Total Power Dissipation @ TA = 25°C Derate above 25°C	PD	350 2.8	mW mW/°C
Total Power Dissipation @ TC = 25°C Derate above 25°C	PD	1.0 8.0	Watt mW/°C
Operating and Storage Junction Temperature Range	TJ, Tstg	-55 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Ambient	RθJA (1)	357	°C/W
Thermal Resistance, Junction to Case	RθJC	125	°C/W

(1) RθJA is measured with the device soldered into a typical printed circuit board.



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.450	5.200	0.175	0.205
B	3.180	4.190	0.125	0.165
C	4.320	5.330	0.170	0.210
D	0.407	0.533	0.016	0.021
F	0.407	0.482	0.016	0.019
K	12.700	—	0.500	—
L	1.150	1.390	0.045	0.055
N	—	1.270	—	0.050
P	6.350	—	0.250	—
O	3.430	—	0.135	—
R	2.410	2.670	0.095	0.105
S	2.030	2.670	0.080	0.105

CASE 29-02
TO-92

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Collector Cutoff Current $V_{CB} = 25 \text{ V}, I_E = 0$	I_{CBO}	—	0.5	μA
$V_{CB} = 25 \text{ V}, I_E = 0, T_A = 100^\circ\text{C}$		—	15	μA
Emitter Cutoff Current $V_{EB} = 5 \text{ V}$	I_{EBO}	—	0.5	μA
Small Signal Current Gain ($f = 1 \text{ kHz}$) $V_{CE} = 10 \text{ V}, I_C = 2 \text{ mA}$	h_{fe}			—
MPS2923		90	180	
MPS2924		150	300	
MPS2925		235	470	
Collector Capacitance $V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$	C_{ob}	—	12	pF

(1) Continuous package improvements have enhanced these guaranteed Maximum Ratings as follows: $P_D = 1.0 \text{ W}$ @ $T_C = 25^\circ\text{C}$, Derate above $25^\circ\text{C} - 8.0 \text{ mW}/^\circ\text{C}$, $T_J = -65$ to $+150^\circ\text{C}$, $\theta_{JC} = 125^\circ\text{C}/\text{W}$.