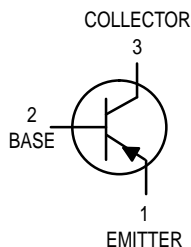


RF Amplifier Transistor

PNP Silicon



MPSH69

Motorola Preferred Device



CASE 29-04, STYLE 1
TO-92 (TO-226AA)

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector–Emitter Voltage	V_{CEO}	–15	Vdc
Collector–Base Voltage	V_{CBO}	–15	Vdc
Emitter–Base Voltage	V_{EBO}	–4.0	Vdc
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	350 2.81	mW mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	–55 to +150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$

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

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

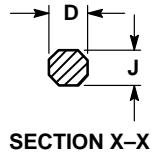
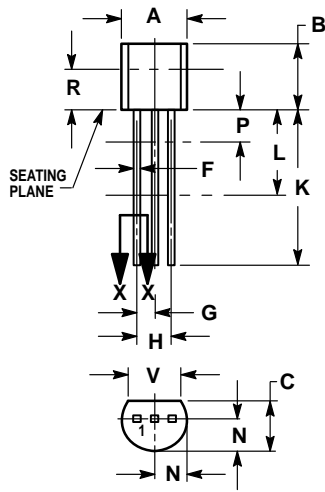
Collector–Emitter Breakdown Voltage ($I_C = -1.0 \text{ mAdc}, I_B = 0$)	$V_{(BR)CEO}$	–15	—	—	Vdc
Collector–Base Breakdown Voltage ($I_C = -10 \mu\text{Adc}, I_E = 0$)	$V_{(BR)CBO}$	–15	—	—	Vdc
Emitter–Base Breakdown Voltage ($I_E = -10 \mu\text{Adc}, I_C = 0$)	$V_{(BR)EBO}$	–4.0	—	—	Vdc
Collector Cutoff Current ($V_{CB} = -10 \text{ Vdc}, I_E = 0$)	I_{CBO}	—	—	–100	nAdc

Preferred devices are Motorola recommended choices for future use and best overall value.

MPSH69**ELECTRICAL CHARACTERISTICS** ($T_A = 25^\circ\text{C}$ unless otherwise noted) (Continued)

Characteristic	Symbol	Min	Typ	Max	Unit
ON CHARACTERISTICS					
DC Current Gain ($I_C = -10\text{ mA dc}$, $V_{CE} = -10\text{ V dc}$)	h_{FE}	30	—	300	—
SMALL-SIGNAL CHARACTERISTICS					
Current-Gain — Bandwidth Product ($I_C = -10\text{ mA dc}$, $V_{CE} = -10\text{ V dc}$, $f = 100\text{ MHz}$)	f_T	2000	—	—	MHz
Collector-Base Capacitance ($V_{CE} = -10\text{ V dc}$, $I_E = 0$, $f = 1.0\text{ MHz}$)	C_{cb}	—	—	0.3	pF

PACKAGE DIMENSIONS




CASE 029-04
(TO-226AA)
ISSUE AD

- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
 2. CONTROLLING DIMENSION: INCH.
 3. CONTOUR OF PACKAGE BEYOND DIMENSION R IS UNCONTROLLED.
 4. DIMENSION F APPLIES BETWEEN P AND L. DIMENSION D AND J APPLY BETWEEN L AND K. MINIMUM LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.175	0.205	4.45	5.20
B	0.170	0.210	4.32	5.33
C	0.125	0.165	3.18	4.19
D	0.016	0.022	0.41	0.55
F	0.016	0.019	0.41	0.48
G	0.045	0.055	1.15	1.39
H	0.095	0.105	2.42	2.66
J	0.015	0.020	0.39	0.50
K	0.500	—	12.70	—
L	0.250	—	6.35	—
N	0.080	0.105	2.04	2.66
P	—	0.100	—	2.54
R	0.115	—	2.93	—
V	0.135	—	3.43	—

- STYLE 1:
- PIN 1. EMITTER
 - BASE
 - COLLECTOR

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