

**MPSH10
MPSH11**

**SILICON
NPN RF TRANSISTORS**



TO-92 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR MPSH10 and MPSH11 are silicon NPN RF transistors manufactured by the epitaxial planar process and designed for low noise UHF/VHF amplifier and high output oscillator applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: ($T_A=25^{\circ}\text{C}$)

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

V_{CBO} 30
 V_{CEO} 25
 V_{EBO} 3.0
 P_D 350
 T_J, T_{stg} -65 to +150
 θ_{JA} 357

UNITS

V
V
V
mW
 $^{\circ}\text{C}$
 $^{\circ}\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=25\text{V}$		100	nA
I_{EBO}	$V_{EB}=2.0\text{V}$		100	nA
BV_{CBO}	$I_C=100\mu\text{A}$	30		V
BV_{CEO}	$I_C=1.0\text{mA}$	25		V
BV_{EBO}	$I_E=10\mu\text{A}$	3.0		V
$V_{CE(SAT)}$	$I_C=4.0\text{mA}, I_B=0.4\text{mA}$		0.50	V
$V_{BE(ON)}$	$V_{CE}=10\text{V}, I_B=4.0\text{mA}$		0.95	V
h_{FE}	$V_{CE}=10\text{V}, I_C=4.0\text{mA}$	60		
f_T	$V_{CE}=10\text{V}, I_C=4.0\text{mA}, f=100\text{MHz}$	650		MHz
C_{cb}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		0.70	pF
C_{rb}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz (MPSH10)}$	0.35	0.65	pF
C_{rb}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz (MPSH11)}$	0.60	0.90	pF
$rb'C_c$	$V_{CB}=10\text{V}, I_C=4.0\text{mA}, f=31.8\text{MHz}$		9.0	ps

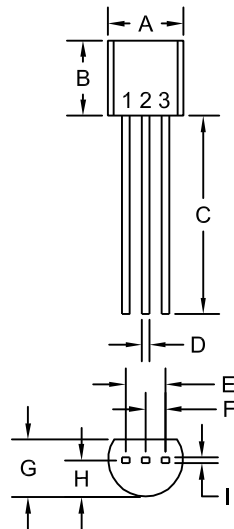
R0 (22-May 2013)

MPSH10
MPSH11

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TO-92 CASE - MECHANICAL OUTLINE



R1

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

LEAD CODE:

- 1) Base
- 2) Emitter
- 3) Collector

MARKING:
FULL PART NUMBER

R0 (22-May 2013)