

**MPSH10  
MPSH11**

**SILICON  
NPN RF TRANSISTORS**

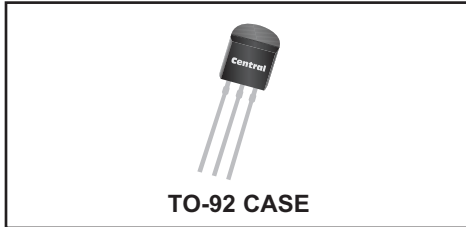


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**DESCRIPTION:**

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

	SYMBOL		UNITS
Collector-Base Voltage	$V_{CBO}$	30	V
Collector-Emitter Voltage	$V_{CEO}$	25	V
Emitter-Base Voltage	$V_{EBO}$	3.0	V
Power Dissipation	$P_D$	350	mW
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$	357	$^\circ\text{C/W}$

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

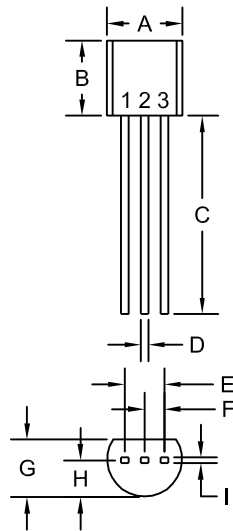
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB}=25\text{V}$		100	nA
$I_{EBO}$	$V_{EB}=2.0\text{V}$		100	nA
$BV_{CBO}$	$I_C=100\mu\text{A}$	30		V
$BV_{CEO}$	$I_C=1.0\text{mA}$	25		V
$BV_{EBO}$	$I_E=10\mu\text{A}$	3.0		V
$V_{CE(SAT)}$	$I_C=4.0\text{mA}, I_B=0.4\text{mA}$		0.50	V
$V_{BE(ON)}$	$V_{CE}=10\text{V}, I_B=4.0\text{mA}$		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)

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TO-92 CASE - MECHANICAL OUTLINE



R1

SYMBOL	DIMENSIONS			
	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)