

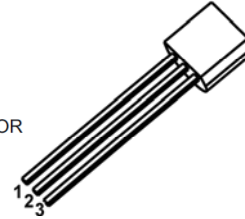
Features

- General purpose amplifier

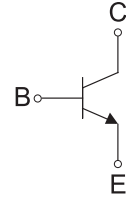
Applications

- In low noise UHF/VHF amplifiers
- In low frequency drift, high output UHF oscillators

1.BASE
 2.EMITTER
 3.COLLECTOR



TO-92



Schematic Diagram

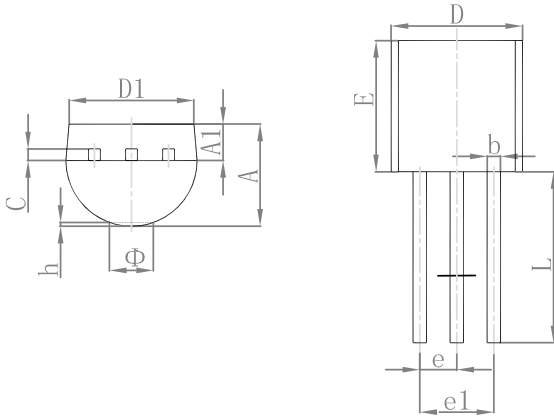
Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	30	V
Collector-Emitter Voltage	V _{CEO}	25	V
Emitter-Base Voltage	V _{EBO}	3	V
Collector Current-Continuous	I _C	40	mA
Collector Power Dissipation	P _C	350	mW
Thermal Resistance from Junction to Ambient	R _{θJA}	357	°C/W
Operation Junction and Storage Temperature Range	T _J /T _{stg}	-55 to +150	°C

Electrical Characteristics (T_A=25°C unless otherwise noted)

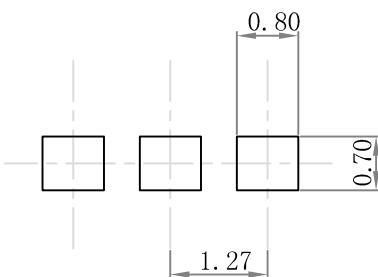
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C =0.1mA, I _E =0	30	-	-	V
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	25	-	-	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E =0.01mA, I _C =0	3	-	-	V
Collector Cut-Off Current	I _{CBO}	V _{CB} =25V, I _E =0	-	-	0.1	μA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =2V, I _C =0	-	-	0.1	μA
DC Current Gain	h _{FE(1)}	V _{CE} =10V, I _C =4mA	60	-	-	-
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =4mA, I _B =0.4mA	-	-	0.5	V
Base-Emitter Voltage	V _{BE}	I _C =4mA, V _{CE} =10V	-	-	0.95	V
Transition Frequency	f _T	V _{CE} =10V, I _C =4mA, F=100MHz	650	-	-	MHz
Collector Output Capacitance	C _{cb}	V _{CB} =10V, I _E =0, F=1MHz	-	-	0.7	pF

Package Outline Dimensions (TO-92)



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430	-	0.135	-
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
ϕ	-	1.600	-	0.063
h	0.000	0.380	0.000	0.015

Recommended Pad Layout



Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

Order Information

Device	Package	Marking	Carrier	Quantity
GSMPSH10	TO-92	MPSH10	Tape	2,000pcs / Box