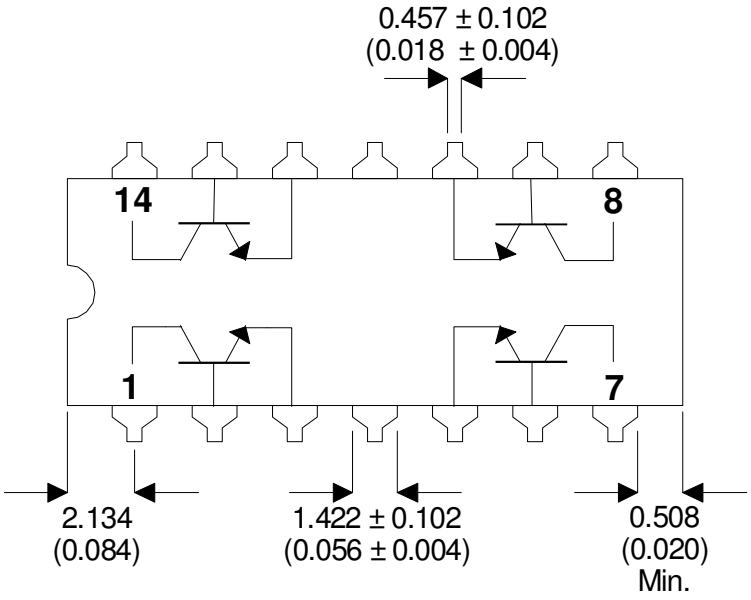
MHQ2222

MECHANICAL DATA

Dimensions in mm (inches)



Quad Dual-In-Line
NPN Silicon Transistors

FEATURES

- **$V_{(BR)CEO}$ = 40V (Min)**
- **Hermetic Package**
- **Screening Options Available**

APPLICATIONS

- **General Purpose Switching**
- **DC to VHF Amplifiers**

ABSOLUTE MAXIMUM RATINGS (T_c = 25°C unless otherwise stated)

V_{CEO}	Collector - Emitter Voltage		40V	
V_{CBO}	Collector - Base Voltage		60V	
V_{EBO}	Emitter – Base Voltage		5V	
I_C	Collector Current - Continuous		500mA	
			Each Transistor	Total Device
P_D	Power Dissipation at	T_A = 25°C	0.65W	1.9W
		Derate Above 25°C	3.72mW/°C	10.88mW/°C
T_J	Junction Temperature		200°C	
T_{stg}	Storage Temperature		-65 to +200°C	

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

Semelab plc. Telephone +44(0)1455 556565. Fax +44(0)1455 552612.
E-mail: sales@semelab.co.uk Website: http://www.semelab.co.uk

ELECTRICAL CHARACTERISTICS (T_C =25°C unless otherwise stated)

	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)CEO}$*	Collector-Emitter Breakdown Voltage	I_C = 10mA	I_B = 0	40			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C = 10µA	I_E = 0	60			
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E = 10µA	I_C = 0	5			
I_{CBO}	Collector-Base Cut-Off Current	I_E = 0	V_{CB} = 50V			50	nA
I_{EBO}	Emitter-Base Cut-Off Current	I_C = 0	V_{EB} = 3V			50	
h_{FE}*	Forward-current transfer ratio	I_C = 10mA	V_{CE} = 10V	75			
		I_C = 150mA	V_{CE} = 10V	100			
		I_C = 300mA	V_{CE} = 10V	30			
$V_{CE(sat)}$*	Collector-Emitter Saturation Voltage	I_C = 150mA	I_B = 15mA			0.4	V
		I_C = 300mA	I_B = 30mA			1.6	
$V_{BE(sat)}$*	Base-Emitter Saturated Voltage	I_C = 150mA	I_B = 15mA			1.3	
		I_C = 300mA	I_B = 30mA			2.5	

DYNAMIC CHARACTERISTICS

F_T	Transition Frequency	I_C = 20mA f = 100MHz	V_{CE} = 20V	200			MHz
C_{obo}	Output Capacitance	I_E = 0 f = 1.0MHz	V_{CB} = 10V			8	pF
C_{ibo}	Input Capacitance	I_C = 0 f = 1.0MHz	V_{EB} = 0.5V			30	
t_{on}	Turn-On Time	V_{CC} = 30V I_C= 150mA	$V_{BE(off)}$ = 0.5V I_{B1} = 15mA		25		nS
t_{off}	Turn-Off Time	V_{CC} = 30V I_C= 150mA	I_{B1} = I_{B2} = 15mA		250		

* Pulse test t_p = 300µs, δ < 2%

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

Semelab plc. Telephone +44(0)1455 556565. Fax +44(0)1455 552612.
E-mail: sales@semelab.co.uk Website: http://www.semelab.co.uk