

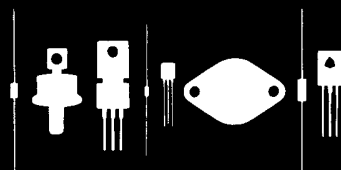
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145 Adams Avenue
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MPQ6501
MPQ6502

COMPLEMENTARY QUAD TRANSISTOR

JEDEC TO-116 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR MPQ6501, MPQ6502, types are comprised of four independent silicon transistors mounted in a 14 PIN DIP, designed for general purpose amplifier and switching applications. The MPQ6501 contains two 2N2221 (NPN) chips and two 2N2906 (PNP) chips, and the MPQ6502 contains two 2N2222 (NPN) chips and two 2N2907 (PNP) chips, both acting as dual complementary pairs.

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

	SYMBOL		UNIT
Collector-Base Voltage	V_{CB0}	60	V
Collector-Emitter Voltage	V_{CE0}	30	V
Emitter-Base Voltage	V_{EB0}	5.0	V
Collector Current	I_C	500	mA
Power Dissipation (Each Transistor)	P_D	650	mW
Power Dissipation (Total Package)	P_D	2000	mW
Operating and Storage Junction Temperature	T_J, T_{STG}	-65 to +150	$^{\circ}\text{C}$

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

SYMBOL	TEST CONDITIONS	MPQ6501		MPQ6502		UNIT
		MIN	MAX	MIN	MAX	
I_{CB0}	$V_{CB}=50\text{V}$		30		30	nA
I_{EB0}	$V_{EB}=3.0\text{V}$		30		30	nA
BV_{CB0}	$I_C=10\mu\text{A}$	60		60		V
BV_{CE0}	$I_C=10\text{mA}$	30		30		V
BV_{EB0}	$I_E=\mu\text{A}$	5.0		5.0		V
$V_{CE}(\text{SAT})$	$I_C=150\text{mA}, I_B=15\text{mA}$		0.4		0.4	V
$V_{CE}(\text{SAT})$	$I_C=300\text{mA}, I_B=30\text{mA}$		1.4		1.4	V
$V_{BE}(\text{SAT})$	$I_C=150\text{mA}, I_B=15\text{mA}$		1.3		1.3	V
$V_{BE}(\text{SAT})$	$I_C=300\text{mA}, I_B=30\text{mA}$		2.0		2.0	V
h_{FE}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}$	25		50		
h_{FE}	$V_{CE}=10\text{V}, I_C=10\text{mA}$	35		75		
h_{FE}	$V_{CE}=10\text{V}, I_C=150\text{mA}$	40		100		
h_{FE}	$V_{CE}=10\text{V}, I_C=300\text{mA}$	20		30		
f_T	$V_{CE}=20\text{V}, I_C=50\text{mA}, f=100\text{MHz}$	200		200		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$		8.0		8.0	pF
C_{ib}	$V_{EB}=2.0\text{V}, I_C=0, f=100\text{kHz}$		30		30	pF
t_{ON}	$V_{CC}=30\text{V}, V_{BE}=0.5\text{V}, I_C=150\text{mA}, I_{B1}=15\text{mA}$	30TYP		30TYP		ns
t_{OFF}	$V_{CC}=30\text{V}, I_C=150\text{mA}, I_{B1}=I_{B2}=15\text{mA}$	225TYP		225TYP		ns

CONNECTION DIAGRAM

