

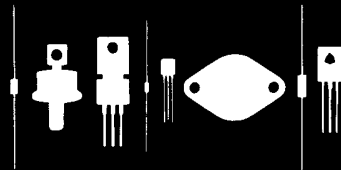
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145 Adams Avenue  
Hauppauge, New York 11788



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.

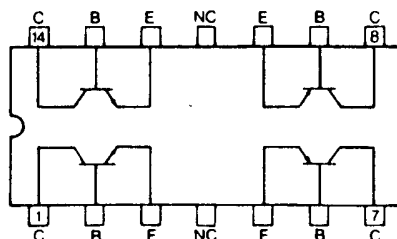
**MAXIMUM RATINGS** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

	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**



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