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Manufacturers of World Class Discrete Semiconductors

MPQ3906

PNP SILICON QUAD TRANSISTOR

JEDEC TO-116 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR MPQ3906 type is comprised of four independent silicon transistors mounted in a 14 PIN DIP, designed for general purpose amplifier and switching applications.

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

	SYMBOL		UNIT
Collector-Base Voltage	V_{CB0}	40	V
Collector-Emitter Voltage	V_{CE0}	40	V
Emitter-Base Voltage	V_{EB0}	5.0	V
Collector Current	I_C	200	mA
Power Dissipation	P_D (EACH TRANSISTOR)	500	mW
Power Dissipation	P_D (TOTAL PACKAGE)	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	MIN	MAX	UNIT
I_{CB0}	$V_{CB}=30\text{V}$		50	nA
I_{EB0}	$V_{BE}=4.0\text{V}$		50	nA
BV_{CB0}	$I_C=10\mu\text{A}$	40		V
BV_{CE0}	$I_C=1.0\text{mA}$	40		V
BV_{EB0}	$I_E=10\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.25	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.85	V
h_{FE}	$V_{CE}=1.0\text{V}, I_C=0.1\text{mA}$	40		
h_{FE}	$V_{CE}=1.0\text{V}, I_C=1.0\text{mA}$	60		
h_{FE}	$V_{CE}=1.0\text{V}, I_C=10\text{mA}$	75		
f_T	$V_{CE}=20\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	200		MHz
C_{ob}	$V_{CB}=5.0\text{V}, I_E=0, f=140\text{kHz}$		4.5	pF
C_{ib}	$V_{BE}=0.5\text{V}, I_C=0, f=140\text{kHz}$		10	pF
t_{on}	$V_{BE}=0.5\text{V}, I_C=10\text{mA}, I_{B1}=1.0\text{mA}$	43 TYP.		ns
t_{off}	$I_C=10\text{mA}, I_{B1}=I_{B2}=1.0\text{mA}$	155 TYP.		ns

CONNECTION DIAGRAM

