

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

MPQ3725

NPN SILICON QUAD TRANSISTOR

JEDEC TO-116 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR MPQ3725 type is comprised of four independent silicon transistors mounted in a 14 PIN-DIP case, designed for core driver applications.

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

	SYMBOL		UNIT
Collector-Base Voltage	V_{CES}	60	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Collector Current	I_C	1.0	A
Power Dissipation (each transistor)	P_D	1.0	W
Power Dissipation (total package)	P_D	2.5	W
Operating and Storage Junction Temperature	T_J, T_{STG}	-65 TO +150	$^\circ\text{C}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
I_{CBO}	$V_{CB}=40\text{V}$		500	nA
BV_{CES}	$I_C=100\mu\text{A}$	60		V
BV_{CEO}	$I_C=10\text{mA}$	40		V
BV_{EBO}	$I_E=10\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$	-	0.45	V
$V_{BE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$	0.80	1.0	V
h_{FE}	$V_{CE}=1.0\text{V}, I_C=100\text{mA}$	35	200	
h_{FE}	$V_{CE}=2.0\text{V}, I_C=500\text{mA}$	25	-	
f_T	$V_{CE}=10\text{V}, I_C=50\text{mA}, f=100\text{MHz}$	250		MHz
t_{ON}	$V_{BE(OFF)}=3.8\text{V}, I_C=500\text{mA}, I_{B1}=50\text{mA}$		35	ns
t_{OFF}	$I_C=500\text{mA}, I_{B1}=I_{B2}=50\text{mA}$		60	ns
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		10	pF
C_{ib}	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		80	pF

CONNECTION DIAGRAM

