

# Central<sup>TM</sup> 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.

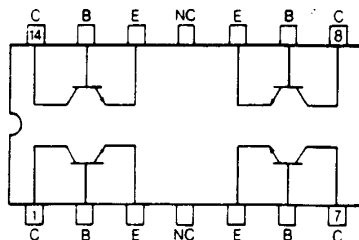
## MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ )

	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



## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

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