

D40D1 D40D5 D40D11
D40D2 D40D7 D40D13
D40D3 D40D8 D40D14
D40D4 D40D10

**NPN SILICON
POWER TRANSISTOR**



TO-202 CASE



www.centralemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR D40D series types are NPN silicon power transistors designed for amplifier and switching applications. The PNP complementary types are the D41D series.

MARKING: FULL PART NUMBER

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

Collector-Emitter Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Peak Collector Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL	D40D1	D40D2	D40D4	D40D7	D40D10	D40D11	UNITS
	D40D3	D40D5	D40D8	D40D14	D40D13	D40D14	
V_{CES}	45	60	75	90			V
V_{CEO}	30	45	60	75			V
V_{EBO}			5.0				V
I_C			1.0				A
I_{CM}			1.5				A
P_D			6.25				W
T_J, T_{stg}			-65 to +150				$^{\circ}\text{C}$
θ_{JC}			20				$^{\circ}\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CES}	$V_{CE}=\text{Rated } V_{CES}$		100	nA
I_{EBO}	$V_{EB}=5.0\text{V}$		100	nA
BV_{CEO}	$I_C=10\text{mA}$ (D40D1, 2, 3)	30		V
BV_{CEO}	$I_C=10\text{mA}$ (D40D4, 5)	45		V
BV_{CEO}	$I_C=10\text{mA}$ (D40D7, 8)	60		V
BV_{CEO}	$I_C=10\text{mA}$ (D40D10, 11, 13, 14)	75		V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$ (D40D1, 2, 4, 5)		0.5	V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$ (D40D7, 8, 10, 11, 13, 14)		1.0	V
$V_{BE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		1.5	V

		D40D1		D40D4		D40D7		D40D10		D40D5		D40D8		D40D11		D40D13		D40D14	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
h_{FE}	$V_{CE}=2.0\text{V}, I_C=100\text{mA}$	50	150	120	360	290	-	120	360										
h_{FE}	$V_{CE}=2.0\text{V}, I_C=1.0\text{A}$ (Except D40D13, 14)	10	-	20	-	10	-	10	-										

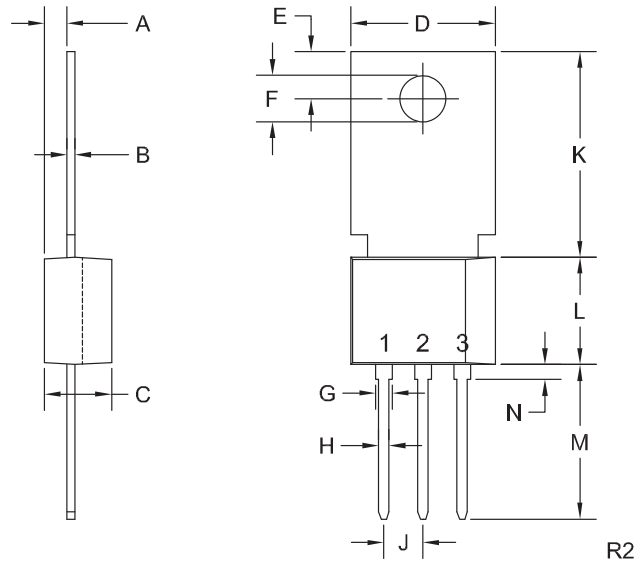
R1 (23-January 2012)

D40D1 D40D5 D40D11
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D40D4 D40D10

**NPN SILICON
POWER TRANSISTOR**



TO-202 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Emitter
- 2) Base
- 3) Collector
- Tab is common to pin 3

MARKING:

FULL PART NUMBER

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.055	0.071	1.40	1.80
B	0.016	0.024	0.40	0.60
C	0.173	0.181	4.40	4.60
D	0.374	0.413	9.50	10.5
E	0.118	0.154	3.00	3.90
F (DIA)	0.124	0.150	3.15	3.80
G	0.035	0.055	0.90	1.40
H	0.023	0.031	0.59	0.80
J	0.094	0.106	2.39	2.69
K	0.459	0.559	11.66	14.21
L	0.280	0.346	7.12	8.80
M	0.406	0.531	10.3	13.5
N	0.024	0.059	0.60	1.50

TO-202 (REV: R2)

R1 (23-January 2012)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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

DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2nd 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

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).

CONTACT US

Corporate Headquarters & Customer Support Team

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www.centrasemi.com/wwreps

Worldwide Distributors:
www.centrasemi.com/wwdistributors

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centrasemi.com/terms



<https://www.centrasemi.com>

Product End of Life Notification

PDN ID:	PDN01270
Notification Date:	5/30/24
Last Buy Date:	Stock Only
Last Shipment Date	Stock Only

Please be advised that Central Semiconductor must immediately discontinue the product(s) listed in the attached PDN notice. Orders can only be accepted for products with available inventory on hand.

You may have purchased one or more of the products listed. Please do not hesitate to contact your local Central Semiconductor sales representative with any questions or needs you may have. Central regrets any inconvenience this may cause.

Sincerely,

Central Semiconductor, LLC

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.



<https://www.centrasemi.com>

Product End of Life Notification

PDN ID:	PDN01270
Notification Date:	5/30/24
Last Buy Date:	Stock Only
Last Shipment Date	Stock Only

Summary: All devices manufactured in the TO-202 and TO-202-2 packages are discontinued and now classified as End of Life (EOL).

Although Central Semiconductor makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Portfolio Management. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

*** All Plating types (PBFREE,TIN/LEAD) for each item listed are included in this notice.**

Central Part Number	Suggested Replacement
CEN-U01A	N/A
CEN-U02	N/A
CEN-U05	N/A
CEN-U05N	N/A
CEN-U06	N/A
CEN-U06N	N/A
CEN-U07	N/A
CEN-U07 MOD1	N/A
CEN-U07N	N/A
CEN-U10	N/A
CEN-U10N	N/A
CEN-U45	N/A
CEN-U45N	N/A
CEN-U51A	N/A
CEN-U52	N/A
CEN-U55	N/A
CEN-U55N	N/A
CEN-U56	N/A
CEN-U56N	N/A
CEN-U57	N/A
CEN-U57N	N/A
CEN-U60	N/A
CEN1314	N/A
CEN1319	N/A
CEN621	N/A
CEN928	N/A
CEN934	N/A
D40C1	N/A
D40C1N	N/A
D40C2	N/A
D40C4	N/A
D40C4N	N/A
D40C5	N/A
D40C7	N/A
D40C8	N/A

*** CONTINUED ***

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Product End of Life Notification

PDN ID:	PDN01270
Notification Date:	5/30/24
Last Buy Date:	Stock Only
Last Shipment Date	Stock Only

*** CONTINUED FROM PRIOR PAGE ***

* All Plating types (PBFREE,TIN/LEAD) for each item listed are included in this notice.

Central Part Number	Suggested Replacement
D40D1	N/A
D40D10	N/A
D40D11	N/A
D40D13	N/A
D40D2	N/A
D40D4	N/A
D40D5	N/A
D40D7	N/A
D40D8	N/A
D40E1	N/A
D40E5	N/A
D40E7	N/A
D40K1	N/A
D40K2	N/A
D40K3	N/A
D40K4	N/A
D41D1	N/A
D41D10	N/A
D41D11	N/A
D41D2	N/A
D41D4	N/A
D41D5	N/A
D41D5 MOD	N/A
D41D7	N/A
D41D8	N/A
D41E1	N/A
D41E5	N/A
D41E7	N/A
D41E7N	N/A
2N6548	N/A
2N6549	N/A
2N6551	N/A
2N6552	N/A
2N6553	N/A
2N6554	N/A
2N6554-N	N/A
2N6555	N/A
2N6556	N/A

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. If you would like assistance, please visit <https://my.centalsemi.com/submit-inquiry?type=ER> to submit an online inquiry.

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