

D40D1 D40D5 D40D11
 D40D2 D40D7 D40D13
 D40D3 D40D8 D40D14
 D40D4 D40D10

**NPN SILICON
 POWER TRANSISTOR**



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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



	SYMBOL	D40D1			D40D10		UNITS
		D40D2	D40D4	D40D7	D40D11	D40D13	
Collector-Emitter Voltage	V_{CES}	45	60	75	90		V
Collector-Emitter Voltage	V_{CEO}	30	45	60	75		V
Emitter-Base Voltage	V_{EBO}			5.0			V
Continuous Collector Current	I_C			1.0			A
Peak Collector Current	I_{CM}			1.5			A
Power Dissipation	P_D			6.25			W
Operating and Storage Junction Temperature	T_J, T_{stg}			-65 to +150			°C
Thermal Resistance	θ_{JC}			20			°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

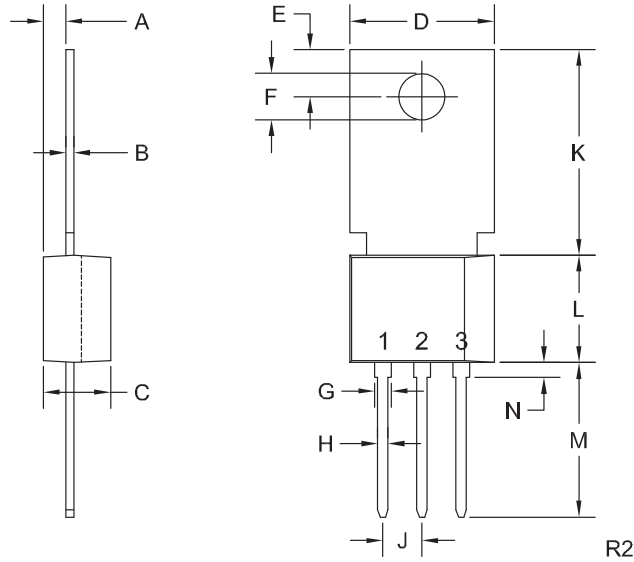
	TEST CONDITIONS	D40D1		D40D4		D40D7		D40D10		D40D5		D40D8		D40D11		D40D13		D40D14	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
h_{FE}	$V_{CE}=2.0\text{V}, I_C=100\text{mA}$	50	150	120	360	290	-	120	360										
h_{FE}	$V_{CE}=2.0\text{V}, I_C=1.0\text{A}$ (Except D40D13,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

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TO-202 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING:

FULL PART NUMBER

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)