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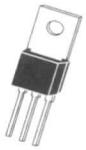
D40K SERIES

NPN SILICON DARLINGTON POWER TRANSISTOR



TO-202 CASE

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**	**D40K1, 3**	**D40K2, 4**	**UNITS**
Collector-Emitter Voltage	V_{CEO}	30	50	V
Collector-Emitter Voltage	V_{CES}	30	50	V
Emitter-Base Voltage	V_{EBO}	13		V
Continuous Collector Current	I_C	2.0		A
Peak Collector Current	I_{CM}	3.0		A
Base Current	I_B	0.2		A
Power Dissipation	P_D	1.67		W
Power Dissipation (T_C=25°C)	P_D	10		W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150		°C
Thermal Resistance	Θ_{JA}	75		°C/W
Thermal Resistance	Θ_{JC}	12.5		°C/W

ELECTRICAL CHARACTERISTICS: (T_C=25°C unless otherwise noted)

SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{CES}	V_{CE}=Rated V_{CE}			500	nA
I_{EBO}	V_{EB}=13V			100	nA
BV_{CEO}	I_C=10mA (D40K1, 3)	30			V
BV_{CEO}	I_C=10mA (D40K2, 4)	50			V
$V_{CE(SAT)}$	I_C=1.5A, I_B=3.0mA (D40K1, 2)			1.5	V
$V_{CE(SAT)}$	I_C=1.0A, I_B=2.0mA (D40K3, 4)			1.5	V
$V_{BE(SAT)}$	I_C=1.5A, I_B=3.0mA (D40K1, 2)			2.5	V
$V_{BE(SAT)}$	I_C=1.0A, I_B=2.0mA (D40K3, 4)			2.5	V
h_{FE}	V_{CE}=5.0V, I_C=200mA	10K			
h_{FE}	V_{CE}=5.0V, I_C=1.5A (D40K1, 2)	1K			
h_{FE}	V_{CE}=5.0V, I_C=1.0A (D40K3, 4)	1K			
C_{cb}	V_{CB}=10V, f=1.0MHz			10	pF
f_T	V_{CE}=5.0V, I_C=20mA		75		MHz

NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

D40K SERIES

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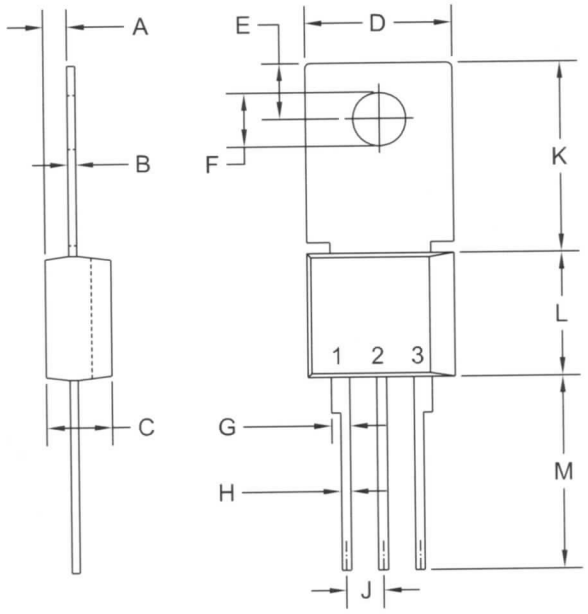
TO-202 CASE - MECHANICAL OUTLINE



R1

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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	10.50
E	0.146	0.154	3.70	3.90
F (DIA)	0.142	0.150	3.60	3.80
G	0.039	0.055	1.00	1.40
H	0.024	0.031	0.60	0.80
J	0.094	0.106	2.39	2.69
K	0.492	0.551	12.50	14.00
L	0.327	0.346	8.30	8.80
M	0.492	0.531	12.50	13.50

TO-202 (REV: R1)

LEAD CODE:
1) EMITTER
2) BASE
3) COLLECTOR
Note: Tab is common to lead 3.

MARKING:
FULL PART NUMBER