Central™
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Manufacturers of World Class Discrete Semiconductors

D40C1

NPN SILICON DARLINGTON POWER TRANSISTOR

JEDEC TO-202 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR D40C1 type is a NPN Silicon Darlington Power Transistors designed general purpose amplifier applications where high gain is required.

MAXIMUM RATINGS (T_C=25°C)

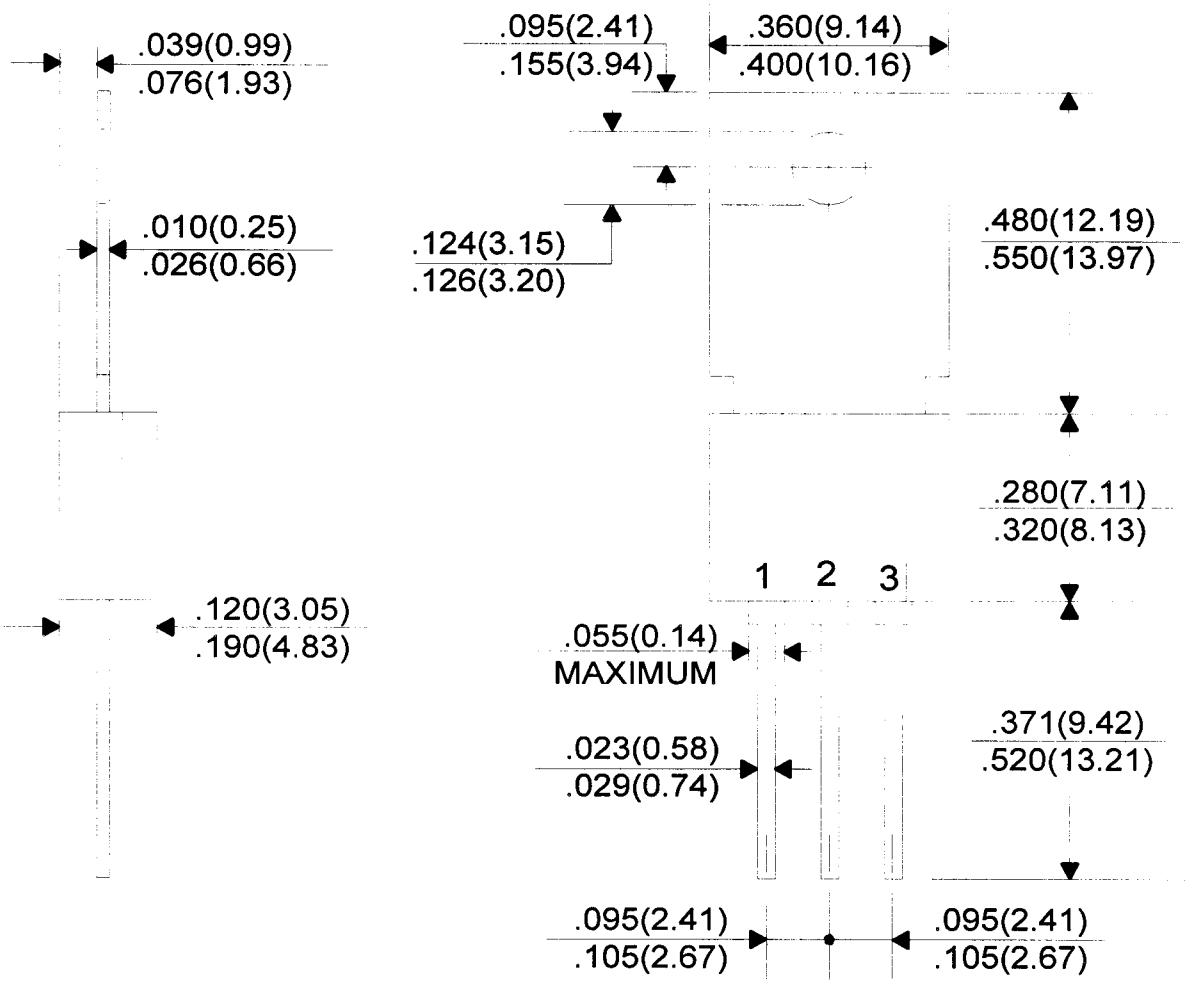
	SYMBOL		UNITS
Collector-Emitter Voltage	V_{CES}	30	V
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Base Voltage	V_{EBO}	13	V
Collector Current	I_C	0.5	A
Collector Current (Peak)	I_C	1.0	A
Power Dissipation	P_D	6.25	W
Operating and Storage Junction Temperature	T_J,T_{stg}	-55 to +150	°C
Thermal Resistance	Θ_{JC}	20	°C/W

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CES}	V_{CE}=30V			500	nA
I_{CBO}	V_{CE}=30V, T_C=150°C			20	μA
I_{EBO}	V_{EB}=13V			100	nA
BV_{CEO}	I_C=10mA	30			V
$V_{CE(SAT)}$	I_C=500mA, I_B=0.5mA			1.5	V
$V_{BE(SAT)}$	I_C=500mA, I_B=0.5mA			2.0	V
h_{FE}	V_{CE}=5.0V, I_C=200mA	10K		70K	
f_T	V_{CE}=5.0V, I_C=20mA		80		MHz
C_{CB}	V_{CB}=10V, f=1.0MHz			10	pF
t_{on}	I_C=1.0A, I_{B1}=1.0mA		120		nsec
t_{off}	I_C=1.0A, I_{B1}=I_{B2}=1.0mA		1200		nsec

(SEE REVERSE SIDE)

JEDEC TO-202 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

Lead Code:

1) Emitter
2) Base
3) Collector

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