

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

CEN-U45

NPN SILICON
DARLINGTON TRANSISTOR

JEDEC TO-202 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CEN-U45 type is a NPN Silicon Monolithic Darlington Transistor designed for applications requiring high gain and high power dissipation.

MAXIMUM RATINGS (T_A=25°C)

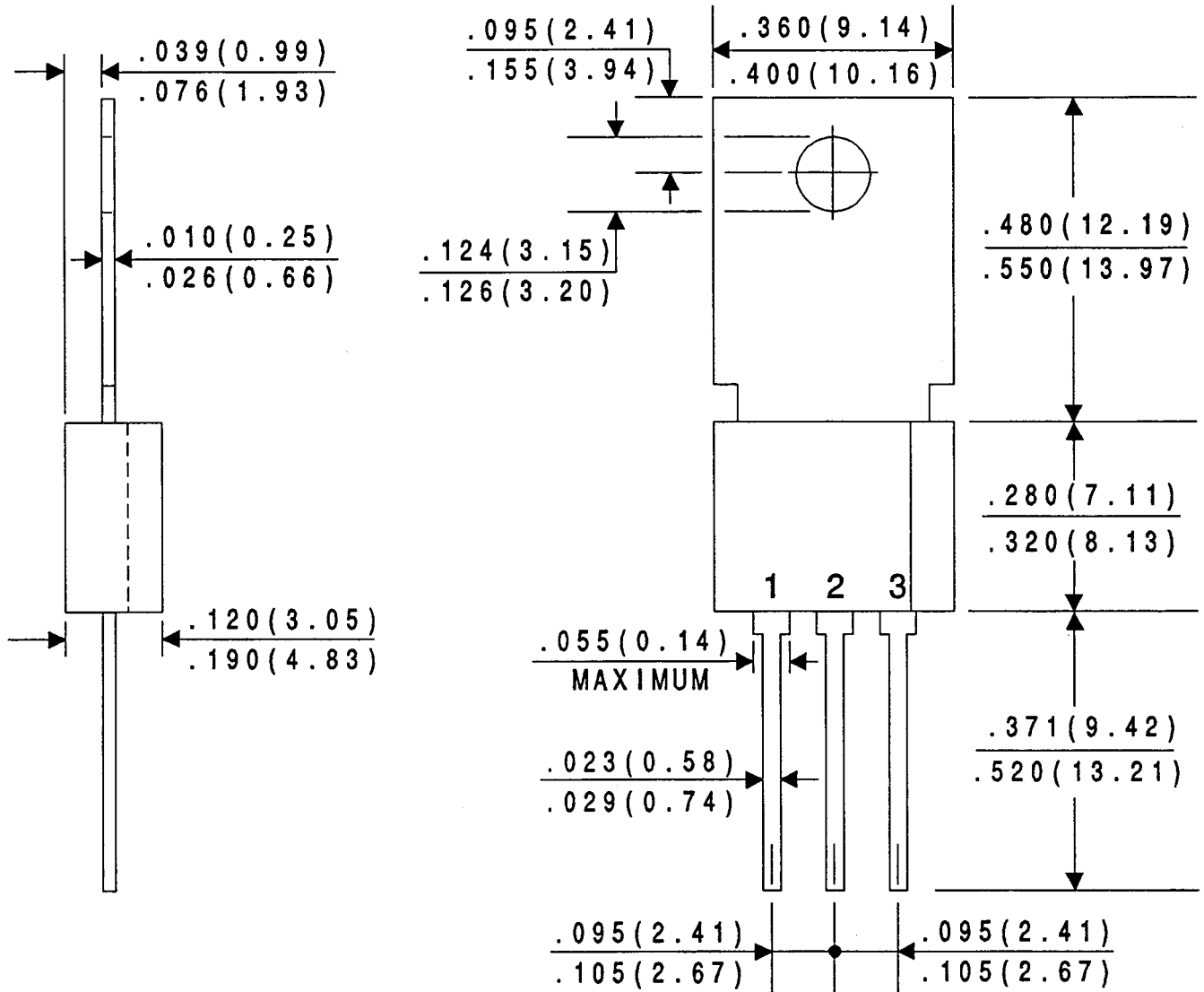
	SYMBOL		UNITS
Collector-Base Voltage	V _{CB0}	50	V
Collector-Emitter Voltage	V _{CES}	40	V
Collector-Emitter Voltage	V _{CEO}	40	V
Emitter-Base Voltage	V _{EBO}	12	V
Collector Current	I _C	2.0	A
Power Dissipation	P _D	2.0	W
Power Dissipation (T _C =25°C)	P _D	10	W
Operating and Storage			
Junction Temperature	T _J , T _{stg}	-65 to +150	°C
Thermal Resistance	θ _{JA}	62.5	°C/W
Thermal Resistance	θ _{JC}	12.5	°C/W

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I _{CB0}	V _{CB} =30V		100	nA
I _{EBO}	V _{EB} =10V		100	nA
BV _{CB0}	I _C =100μA	50		V
BV _{CES}	I _C =100μA	40		V
BV _{EBO}	I _E =10μA	12		V
V _{CE(SAT)}	I _C =1.0A, I _B =200mA		1.0	V
V _{BE(SAT)}	I _C =1.0A, I _B =200mA		2.0	V
V _{BE(ON)}	V _{CE} =5.0V, I _C =1.0A		2.0	V
h _{FE}	V _{CE} =5.0V, I _C =200mA	25K	150K	
h _{FE}	V _{CE} =5.0V, I _C =500mA	15K		
h _{FE}	V _{CE} =5.0V, I _C =1.0A	4.0K		
f _T	V _{CE} =5.0V, I _C =200mA, f=100MHz	100		MHz
C _{ob}	V _{CB} =10V, I _E =0, f=1.0MHz		8.0	pF



JEDEC TO-202 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

LEAD CODE:

- 1) EMITTER
- 2) BASE
- 3) COLLECTOR