Data Sheet

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Manufacturers of World Class Discrete Semiconductors

CM5160

PNP HIGH FREQUENCY SILICON TRANSISTOR

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CM5160 is a Silicon PNP RF Transistor, mounted in a hermetically sealed package, designed for high frequency amplifier and non-saturated switching applications. This device is a replacement for the 2N5160.

MAXIMUM RATINGS (T_A=25°C)

	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	4.0	V
Collector Current - Continuous	I_C	400	mA
Power Dissipation	P_D	1.0	W
Power Dissipation (T_C=25°C)	P_D	5.0	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200	°C

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CBO}	V_{CB}=28V			1.0	μA
I_{CES}	V_{CE}=60V			100	μA
I_{CEO}	V_{CB}=28V			20	μA
BV_{CEO}	I_C=5.0mA	40			V
BV_{EBO}	I_E=100μA	4.0			V
$V_{CE(SAT)}$	I_C=100mA, I_B=10mA		0.25	0.6	V
$V_{BE(ON)}$	V_{CE}=2.0V, I_C=100mA		0.82	1.6	V
h_{FE}	V_{CE}=5.0V, I_C=50mA	30	60		
h_{FE}	V_{CE}=5.0V, I_C=100mA	25	50		
h_{FE}	V_{CE}=5.0V, I_C=300mA	12	20		
f_T	V_{CE}=15V, I_C=50mA, f=200MHz	500	900		MHz
C_{cb}	V_{CB}=28V, I_E=0, f=0.1 to 1.0 MHZ		3.2	4.0	pF
C_{eb}	V_{EB}=0.5V, I_C=0, f=0.1 to 1.0 MHz		40	70	pF
*t_d	V_{CC}=31.4V, I_C=150mA, R_C=160Ω, R_E=26.6Ω		2.6		ns
*t_r	V_{CC}=31.4V, I_C=150mA, R_C=160Ω, R_E=26.6Ω		4.0		ns
*t_f	V_{CC}=31.4V, I_C=150mA, R_C=160Ω, R_E=26.6Ω		3.0		ns
*t_s	V_{CC}=31.4V, I_C=150mA, R_C=160Ω, R_E=26.6Ω		3.2		ns

*See Figure 1

(See Reverse Side)

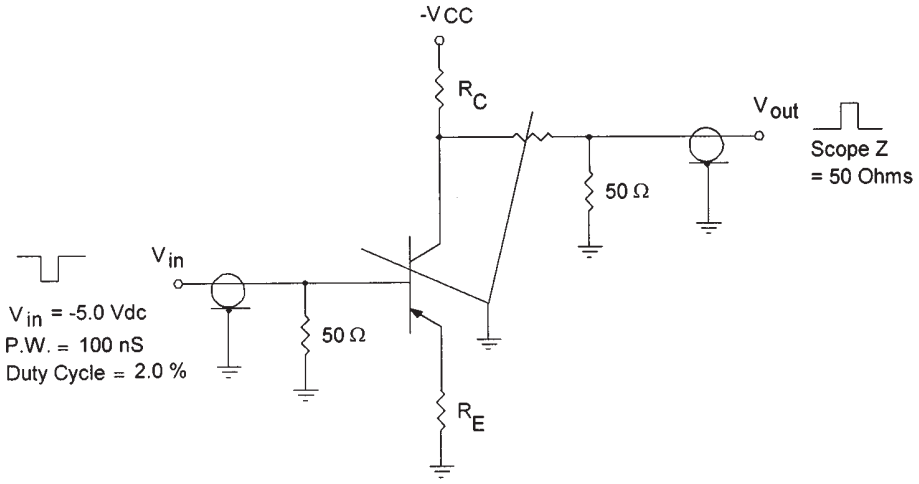
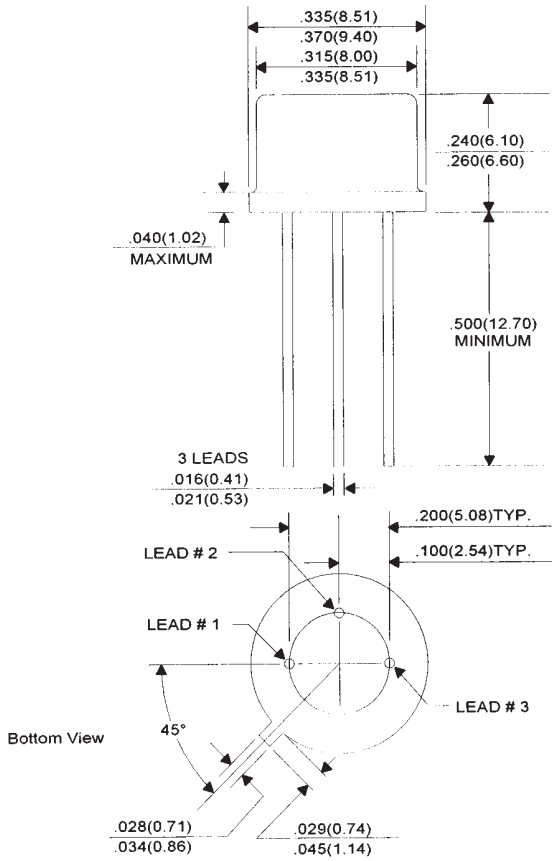


Figure 1. Switching Time Test Circuit

JEDEC TO-39 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

Lead Code:

1) Emitter
2) Base
3) Collector

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