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Manufacturers of World Class Discrete Semiconductors

CM5583

PNP HIGH FREQUENCY
SILICON TRANSISTOR

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CM5583 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 2N5583.

MAXIMUM RATINGS (T_A=25°C)

	SYMBOL		UNITS
Collector-Base Voltage	V _{CBO}	30	V
Collector-Emitter Voltage	V _{CEO}	30	V
Emitter-Base Voltage	V _{EBO}	3.0	V
Collector Current - Continuous	I _C	500	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} =20V			50	nA
I _{EBO}	V _{EB} =2.0V			500	nA
BV _{CBO}	I _C =10μA	30			V
BV _{CEO}	I _C =10mA	30			V
BV _{EBO}	I _E =100μA	3.0			V
V _{CE(SAT)}	I _C =100mA, I _B =10mA			0.8	V
V _{BE(ON)}	V _{CE} =2.0V, I _C =100mA			1.8	V
h _{FE}	V _{CE} =2.0V, I _C =40mA	20			
h _{FE}	V _{CE} =2.0V, I _C =100mA	25		100	
h _{FE}	V _{CE} =5.0V, I _C =300mA	15			
f _T	V _{CE} =10V, I _C =40mA, f=100MHz	1000			MHz
f _T	V _{CE} =10V, I _C =100mA, f=100MHz	1300			MHz
C _{cb}	V _{CB} =15V, I _E =0, f=100kHz			5.0	pF
C _{eb}	V _{EB} =0.5V, I _C =0, f=100kHz			70	pF
r _b 'C _c	V _{CB} =10V, I _C =50mA, f=63.6MHz		8.0		ps
*t _d	V _{CC} =31.4V, I _C =150mA, R _C =160Ω, R _E =26.6Ω		2.5		ns
*t _r	V _{CC} =31.4V, I _C =150mA, R _C =160Ω, R _E =26.6Ω		4.5		ns
*t _s	V _{CC} =31.4V, I _C =150mA, R _C =160Ω, R _E =26.6Ω		3.5		ns
*t _f	V _{CC} =31.4V, I _C =150mA, R _C =160Ω, R _E =26.6Ω		5.0		ns

*See Figure 1

(See Reverse Side)

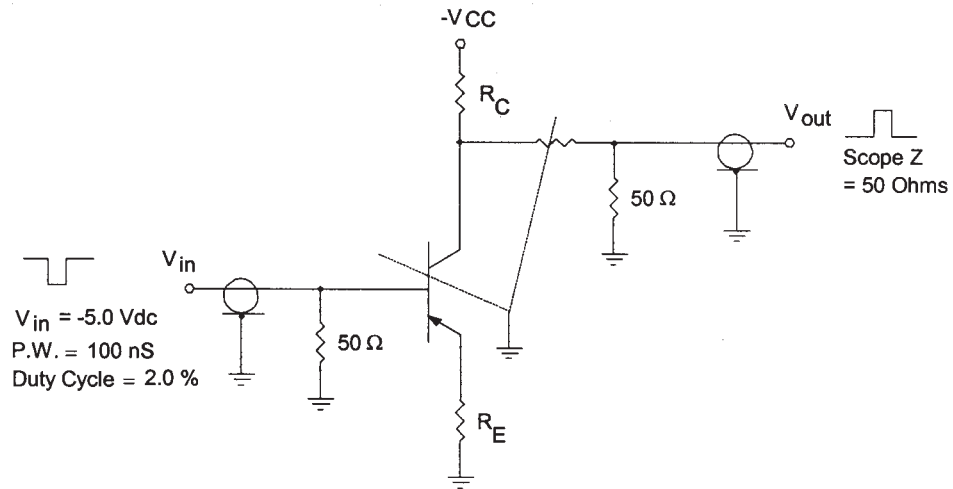
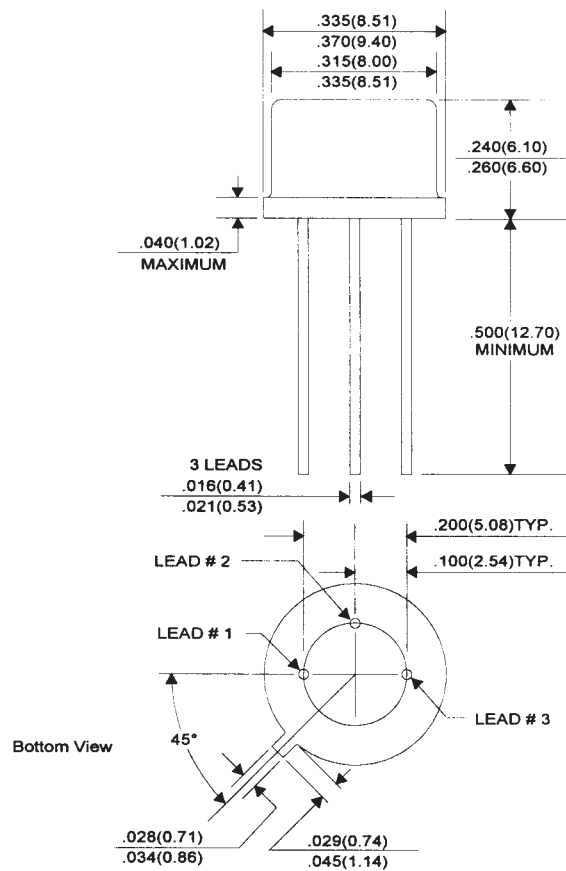


Figure 1. Switching Times Test Circuit

JEDEC TO-39 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

Lead Code:

- 1) Emitter
- 2) Base
- 3) Collector