Data Sheet

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Manufacturers of World Class Discrete Semiconductors

CM2894A

**PNP SILICON
SWITCHING TRANSISTOR**

JEDEC TO-18 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CM2894A type is a Silicon PNP Saturated Switching Transistor designed for high speed switching applications.

MAXIMUM RATINGS ($T_A=25°C$)

	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	15	V
Collector-Emitter Voltage	V_{CEO}	15	V
Emitter-Base Voltage	V_{EBO}	4.5	V
Collector Current	I_C	50	mA
Power Dissipation	P_D	360	mW
Power Dissipation ($T_C=25°C$)	P_D	1.2	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200	°C
Thermal Resistance	Θ_{JA}	486	°C/W
Thermal Resistance	Θ_{JC}	146	°C/W

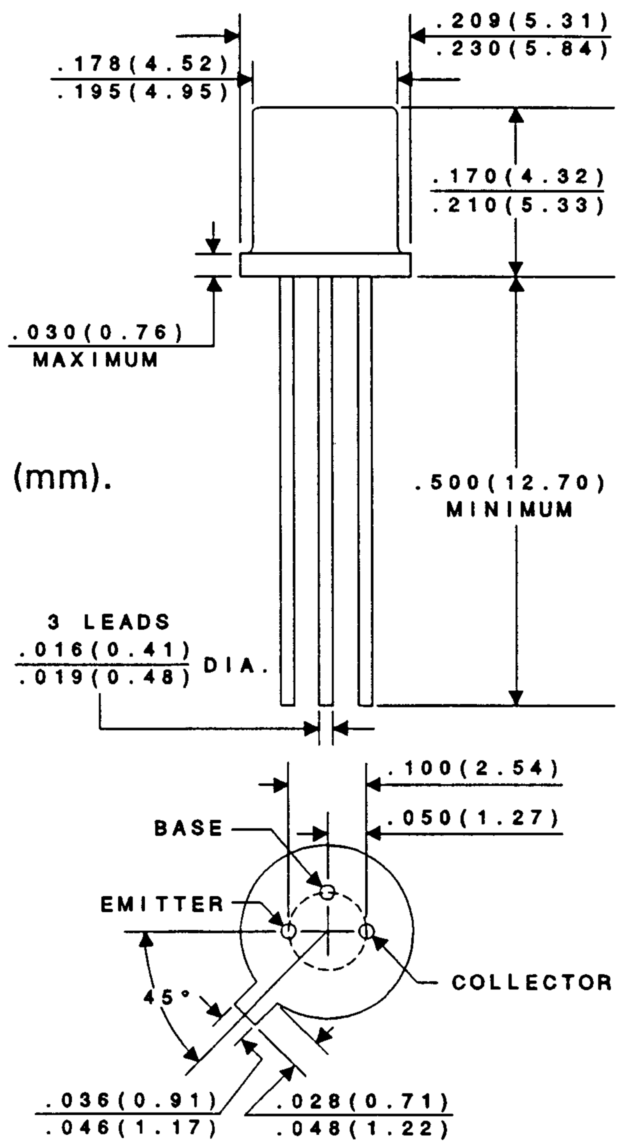
ELECTRICAL CHARACTERISTICS ($T_A=25°C$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=8.0V$		10	nA
I_{CES}	$V_{CE}=8.0V$		10	nA
I_{CES}	$V_{CE}=8.0V$, $T_A=125°C$		5.0	µA
I_{EBO}	$V_{EB}=4.5V$		1.0	µA
BV_{CBO}	$I_C=100µA$	15		V
BV_{CES}	$I_C=100µA$	15		V
BV_{CEO}	$I_C=3.0mA$	15		V
BV_{EBO}	$I_E=100µA$	4.5		V
$V_{CE(SAT)}$	$I_C=1.0mA$, $I_B=100µA$		0.15	V
$V_{CE(SAT)}$	$I_C=10mA$, $I_B=1.0mA$		0.18	V
$V_{CE(SAT)}$	$I_C=50mA$, $I_B=5.0mA$		0.60	V
$V_{BE(SAT)}$	$I_C=1.0mA$, $I_B=100µA$		0.80	V
$V_{BE(SAT)}$	$I_C=10mA$, $I_B=1.0mA$	0.75	0.95	V
$V_{BE(SAT)}$	$I_C=50mA$, $I_B=5.0mA$		1.50	V
h_{FE}	$V_{CE}=0.5V$, $I_C=1.0mA$	30		
h_{FE}	$V_{CE}=1.0V$, $I_C=10mA$	35	120	
h_{FE}	$V_{CE}=1.0V$, $I_C=50mA$	25		

ELECTRICAL CHARACTERISTICS (Continued)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
C_{ob}	$V_{CB}=5.0V$, $I_E=0$, $f=1.0MHz$		6.0	pF
C_{ib}	$V_{BE}=0.5V$, $I_C=0$, $f=1.0MHz$		6.0	pF
f_T	$V_{CE}=10V$, $I_C=10mA$, $f=100MHz$	850		MHz
t_{on}	$V_{CC}=1.5V$, $I_C=10mA$, $I_B=1.0mA$		15	ns
t_d	$V_{CC}=1.5V$, $I_C=10mA$, $I_B=1.0mA$		10	ns
t_r	$V_{CC}=1.5V$, $I_C=10mA$, $I_B=1.0mA$		15	ns
t_{off}	$V_{CC}=1.5V$, $I_C=10mA$, $I_{B1}=I_{B2}=1.0mA$		20	ns
t_f	$V_{CC}=1.5V$, $I_C=10mA$, $I_{B1}=I_{B2}=1.0mA$		10	ns
t_s	$V_{CC}=1.5V$, $I_C=10mA$, $I_{B1}=I_{B2}=10mA$		20	ns

JEDEC TO-18 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

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