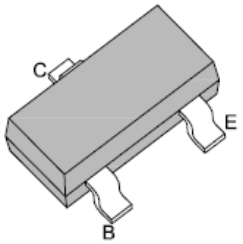
SMD General Purpose Transistor (PNP)



SOT-23

Features

- PNP Silicon Epitaxial Planar Transistor for Switching and Amplifier Applications
- RoHS compliance

Mechanical Data

Case:	SOT-23, Plastic Package
Terminals:	Solderable per MIL-STD-202G, Method 208
Weight:	0.008 gram

Maximum Ratings *($T_{Ambient}$=25ºC unless noted otherwise)*

Symbol	Description	MMBT3906	Unit
	Marking Code	2A	
$-V_{CBO}$	Collector-Base Voltage	40	V
$-V_{CEO}$	Collector-Emitter Voltage	40	V
$-V_{EBO}$	Emitter-Base Voltage	5.0	V
$-I_C$	Collector Current	200	mA
P_{tot}	Power Dissipation above 25°C	250	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	450	° C /W
T_J	Junction Temperature	150	° C
T_{STG}	Storage Temperature Range	-55 to +150	° C

Electrical Characteristics *($T_{Ambient}$=25°C unless noted otherwise)*

Symbol	Description	MMBT3906		Unit	Conditions
		Min.	Max.		
h_{FE}*	D.C. Current Gain	60	-		$-V_{CE}$=1V, $-I_C$=0.1mA
		80	-		$-V_{CE}$=1V, $-I_C$=1mA
		100	300		$-V_{CE}$=1V, $-I_C$=10mA
		60	-		$-V_{CE}$=1V, $-I_C$=50mA
		30	-		$-V_{CE}$=1V, $-I_C$=100mA
$-V_{(BR)CBO}$	Collector-Base Breakdown Voltage	40		V	$-I_C$=10μA, I_E=0
$-V_{(BR)CEO}$*	Collector-Emitter Breakdown Voltage	40	-	V	$-I_C$=1mA, I_B=0
$-V_{(BR)EBO}$*	Emitter-Base Breakdown Voltage	5.0	-	V	$-I_E$=10μA, I_C=0
$-V_{CE(sat)}$*	Collector-Emitter Saturation Voltage	-	0.25	V	$-I_C$=10mA, $-I_B$=1mA
		-	0.4		$-I_C$=50mA, $-I_B$=5mA
$-V_{BE(sat)}$*	Base-Emitter Saturation Voltage	0.65	0.85	V	$-I_C$=10mA, $-I_B$=1mA
		-	0.95		$-I_C$=50mA, $-I_B$=5mA
$-I_{CEV}$	Collector-Emitter Cut-off Current	-	50	nA	$-V_{EB}$=3V, $-V_{CE}$=30V
$-I_{EBV}$	Emitter-Base Cut-off Current	-	50	nA	$-V_{EB}$=3V, $-V_{CE}$=30V
f_T	Current Gain-Bandwidth Product	250	-	MHz	$-V_{CE}$=20V, $-I_C$=10mA, f=100MHz
C_{CBO}	Collector-Base Capacitance	-	4.5	pF	$-V_{CB}$=5V, I_E=0, f=100KHz
C_{EBO}	Emitter-Base Capacitance	-	10	pF	$-V_{EB}$=0.5V, I_C=0 f=100KHz
NF	Noise Figure	-	4.0	dB	$-V_{CE}$=5V, $-I_C$=100μA, R_G=1KΩ, f=10Hz to 15.7kHz
h_{fe}	Small Signal Current Gain	100	400		$-V_{CE}$=10V, $-I_C$=1mA f=1KHz
t_d	Delay Time (see Fig 1)	-	35	nS	$-I_{B1}$=1mA, $-I_C$=10mA
t_r	Rise Time (see Fig 1)	-	35		$-I_{B1}$=1mA, $-I_C$=10mA
t_s	Storage Time (see Fig 2)	-	225		I_{B1}=$-I_{B2}$=1mA, $-I_C$=10mA
t_f	Fall Time (see Fig 2)	-	75		I_{B1}=$-I_{B2}$=1mA, $-I_C$=10mA

Note: *Pulse Test: Pulse Width≤ 300μs, Duty Cycle ≤2.0%

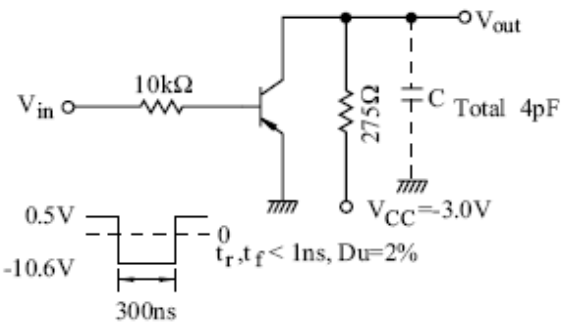


Fig 1

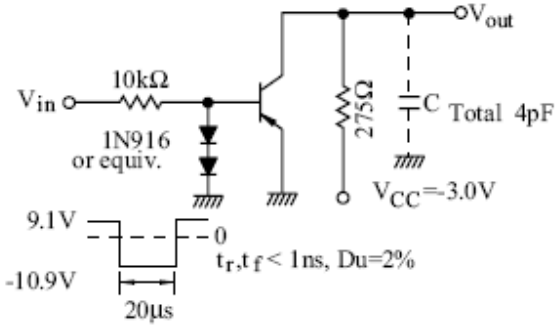
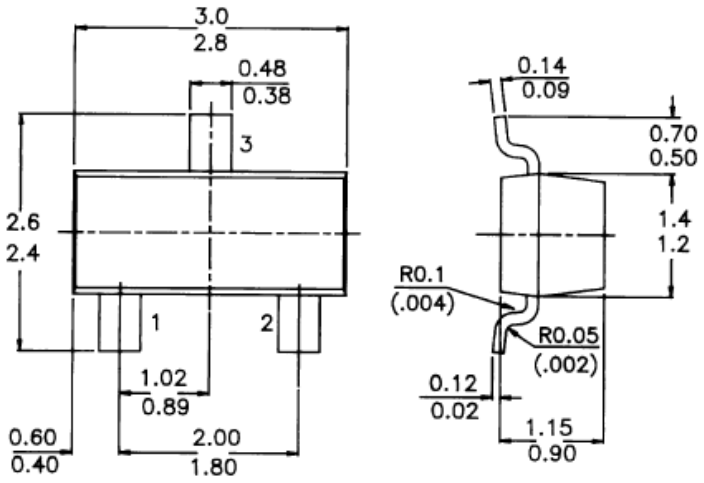


Fig 2

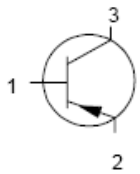
Dimensions in mm

SOT-23



Pin configuration

1 = BASE
2 = EMITTER
3 = COLLECTOR



How to contact us:

US HEADQUARTERS

28040 WEST HARRISON PARKWAY, VALENCIA, CA 91355-4162
Tel: (800) TAITRON (800) 824-8766 (661) 257-6060
Fax: (800) TAITFAX (800) 824-8329 (661) 257-6415
Email: taitron@taitroncomponents.com
Http://www.taitroncomponents.com

TAITRON COMPONENTS MEXICO, S.A .DE C.V.

BOULEVARD CENTRAL 5000 INTERIOR 5 PARQUE INDUSTRIAL ATITALAQUIA, HIDALGO C.P. 42970 MEXICO
Tel: +52-55-5560-1519
Fax: +52-55-5560-2190

TAITRON COMPONENTS INCORPORATED REPRESENTAÇÕES DO BRASIL LTDA

RUA DOMINGOS DE MORAIS, 2777, 2.ANDAR, SALA 24 SAÚDE - SÃO PAULO-SP 04035-001 BRAZIL
Tel: +55-11-5574-7949
Fax: +55-11-5572-0052

TAITRON COMPONENTS INCORPORATED, SHANGHAI REPRESENTATIVE OFFICE

METROBANK PLAZA, 1160 WEST YAN' AN ROAD, SUITE 1503, SHANGHAI, 200052, CHINA
Tel: +86-21-5424-9942
Fax: +86-21-5424-9931