WS8050 NPN Medium Power Transistor

GENERAL DESCRIPTION

WS8050 is NPN medium power transistor fabricated on the epitaxial silicon wafers. It is complimentary to WS8550. It can be widely used in audio amplifiers and switching.

• FEATURES

- Complimentary to WS8550
- Collector Current : Ic =1.5A
- Collector-emitter voltage: Vceo=25V

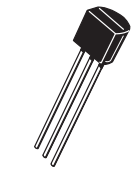
•APPLICATION AND PACKAGE

- Medium power switching and amplifier

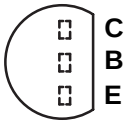
• ORDER NAME

- WS8050P TO-92 Packages
- WS8050S SOT-23 Packages

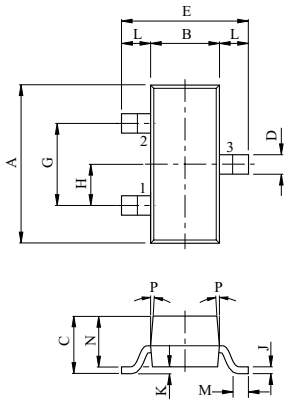
PACKAGE DIAGRAM



E,B,C



TO-92 Package and Pin location



DIM	MILLIMETERS
A	2.93±0.20
B	1.30+0.20/-0.15
C	1.30 MAX
D	0.45+0.15/-0.05
E	2.40+0.30/-0.20
G	1.90
H	0.95
J	0.13+0.10/-0.05
K	0.00 ~ 0.10
L	0.55
M	0.20 MIN
N	1.00+0.20/-0.10
P	7°

1. EMITTER
2. BASE
3. COLLECTOR

SOT-23 Package and Pin location

ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Rating	Units
V_{CB0}	Collector-Base Voltage	40	V
V_{CE0}	Collector-Emitter Voltage	25	V
V_{EB0}	Emitter -Base Voltage	6	V
I_C	Collector Current	1.5	A
P_C	Collector Power Dissipation	1.0	W
T_j	Junction Temperature	150	℃
T_{STG}	Storage Temperature	-65 ~ 150	℃

ELECTRICAL CHARACTERISTICS

(Ta = 25℃, unless otherwise specified)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
BV_{CB0}	Collector-Base Breakdown Voltage	I_C=100μA, I_E=0	40			V
BV_{CE0}	Collector- Emitter Breakdown Voltage	I_C=2mA, I_B=0	25			V
BV_{EB0}	Emitter -Base Breakdown Voltage	I_E=100μA, I_C=0	6			V
I_{CBO}	Collector Cut-off Current	V_{CB}=35V, I_E=0			100	nA
I_{EBO}	Emitter Cut-off Current	V_{EB}=6V, I_C=0			100	nA
h_{FE1}	DC Current Gain	V_{CE}=1V, I_C=5mA	45			
h_{FE2}		V_{CE}=1V, I_C=100mA	85		300	
h_{FE3}		V_{CE}=1V, I_C=800mA	40			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C=800mA, I_B=80mA			0.5	V
$V_{BE(sat)}$	Emitter –Base Saturation Voltage	I_C=800mA, I_B=80mA			1.2	V
$V_{BE(on)}$	Base- Emitter on Voltage	V_{CE}=1V, I_C=10mA			1.0	V
C_{ob}	Output Capacitance	V_{CB}=10V, I_E=0, f=1MHz		9.0		pF
f_T	Current Gain Bandwidth Product	V_{CE}=10V, I_C=50mA	100			MHz

h_{FE} CLASSIFICATION (V_{CE}=1V, I_C=100mA)

Classification	B	C	D
h_{FE}	85 ~ 160	120 ~ 200	160 ~ 300