

WPT2F06

PNP, General Purpose Transistors

[Http://www.willsemi.com](http://www.willsemi.com)

Descriptions

The WPT2F06 is designed for general purpose amplifier applications. Standard products are Pb-free and Halogen-free

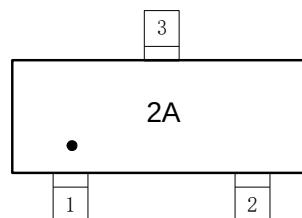


SOT-23

Features

- Complementary to WNT2F04
- Collector Current: $I_C = -0.2A$

(Top View)



Marking :2A

**1: BASE
2: EMITTER
3: COLLECTOR**

Order information

Device	Package	Shipping
WPT2F06-3/TR	SOT-23	3000/Reel&Tape

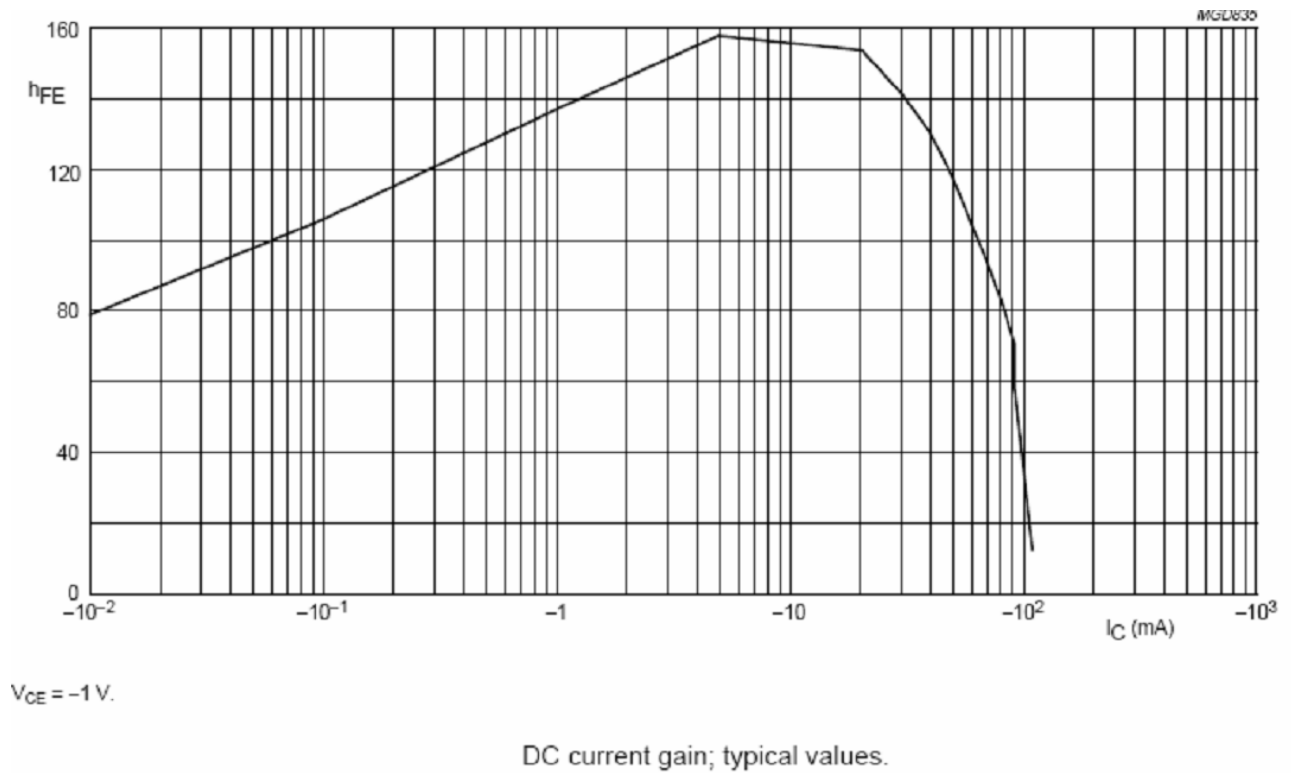
Absolute maximum ratings

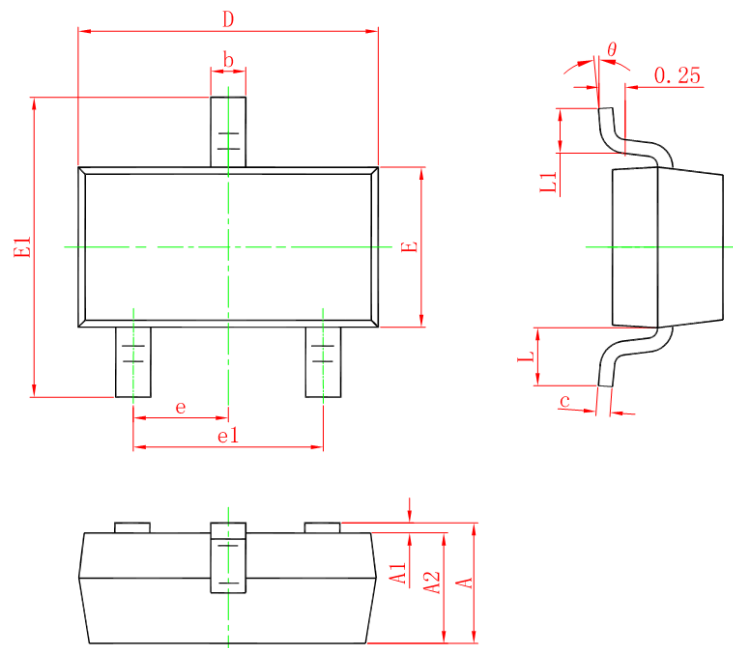
Parameter	Symbol	Value	Unit
Collector-emitter Voltage	V_{CEO}	-40	V
Collector-base Voltage	V_{CBO}	-40	V
Emitter-base Voltage	V_{EBO}	-5	V
Continues Collector Current	I_C	-200	mA
Collector Power Dissipation	P_C	200	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	625	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^{\circ}\text{C}$

Electronics Characteristics ($T_a=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-emitter breakdown voltage	BV_{CEO}	$I_C=-1\text{mA}$, $I_B=0\text{mA}$	-40			V
Collector-base breakdown voltage	BV_{CBO}	$I_C=10\mu\text{A}$, $I_E=0\text{mA}$	-40			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E=-10\mu\text{A}$, $I_C=0\text{mA}$	-5			V
Collector cutoff current	I_{CEX}	$V_{CE}=-30\text{V}$, $V_{EB(OFF)}=-3\text{V}$			-50	nA
Collector cutoff current	I_{CBO}	$V_{CB}=-40\text{V}$, $I_E=0\text{A}$			-100	nA
Emitter cutoff current	I_{EBO}	$V_{EB}=-5\text{V}$, $I_C=0\text{A}$			-100	nA
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-50\text{mA}$, $I_B=-5\text{mA}$			-0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-50\text{mA}$, $I_B=-5\text{mA}$			-0.95	V
DC current gain	h_{FE}	$I_C=-10\text{mA}$, $V_{CE}=-1\text{V}$	100		300	
	h_{FE}	$I_C=-50\text{mA}$, $V_{CE}=-1\text{V}$	60			
	h_{FE}	$I_C=-100\text{mA}$, $V_{CE}=-1\text{V}$	30			
Transition frequency	f_T	$V_{CE}=-20\text{V}$, $I_C=-10\text{mA}$, $f=100\text{MHz}$	250			MHz
Noise figure	NF	$I_C=-100\mu\text{A}$; $V_{CE}=-5\text{V}$; $R_S=1\text{ k}\Omega$; $f=10\text{Hz}$ to 15.7 kHz			4	dB
Delay time	t_d	$V_{CC}=-3\text{V}$, $V_{BE(off)}=-0.5\text{V}$			35	ns
Rise time	t_r	$I_C=-10\text{mA}$, $I_{B1}=-1\text{mA}$			35	ns
Storage time	t_s	$V_{CC}=-3\text{V}$, $I_C=-10\text{mA}$,			225	ns
Fall time	t_f	$I_{B1}=I_{B2}=-1\text{mA}$			75	ns

Typical characteristics (Ta=25°C, unless otherwise noted)



Package outline dimensions
SOT-23


Symbol	Dimensions in millimeter		
	Min.	Typ.	Max.
A	0.900	1.025	1.150
A1	0.000	0.500	0.100
A2	0.900	0.975	1.050
b	0.300	0.400	0.500
c	0.080	0.115	0.150
D	2.800	2.900	3.000
E	1.200	1.300	1.400
E1	2.250	2.400	2.550
e	0.950TYP		
e1	1.800	1.900	2.000
L	0.500REF		
L1	0.300	0.400	0.500
θ	0°	4°	8°

Recommend PCB Layout (Unit: mm)
