

N0202R

R07DS0720EJ0100

Rev.1.00

PNP SILICON EPITAXIAL TRANSISTOR

Mar 30, 2012

FEATURES

- Complements to N0202S.
- $V_{CEO} = -20\text{ V}$
- $I_{C(DC)} = -2.0\text{ A}$
- Miniature package SOT-23F (2SB1114: Package variation of 3pPoMM)

PRODUCT LINEUP

Part Number	Packing	Package Name	Package Code	Mass [TYP.]
N0202R-T1-AT	Tape 3000p/reel	SOT-23F	PVSF0003ZA-A	0.0126g

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	-20	V
Collector to Emitter Voltage	V_{CEO}	-20	V
Emitter to Base Voltage	V_{EBO}	-6.0	V
Collector Current (DC)	$I_{C(DC)}$	-2.0	A
Collector Current (pulse) *1	$I_{C(pulse)}$	-3.0	A
Total Power Dissipation	P_{T1}	0.2	W
Total Power Dissipation *2	P_{T2}	1.0	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Note *1. $PW \leq 10\text{ ms}$, Duty Cycle $\leq 50\%$

*2. FR-4 board size $2500\text{ mm}^2 \times 1.6\text{ mm}$, $t \leq 5\text{ sec}$

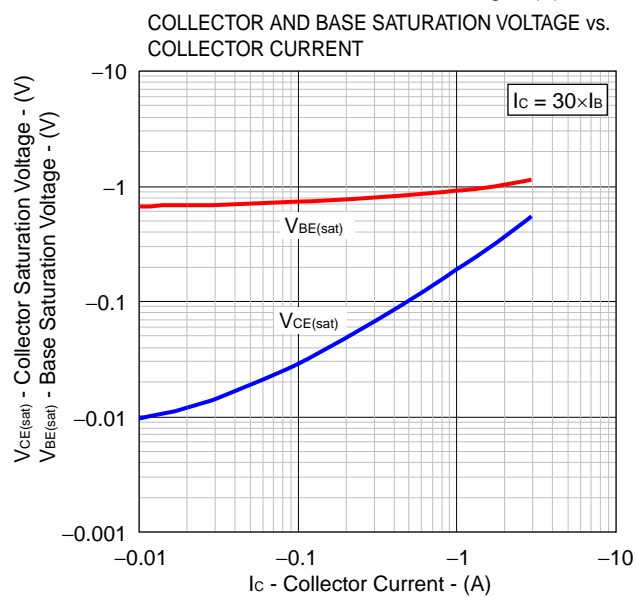
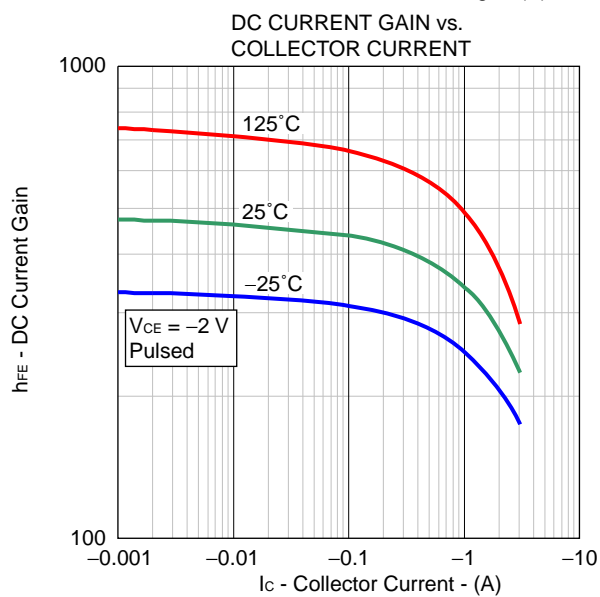
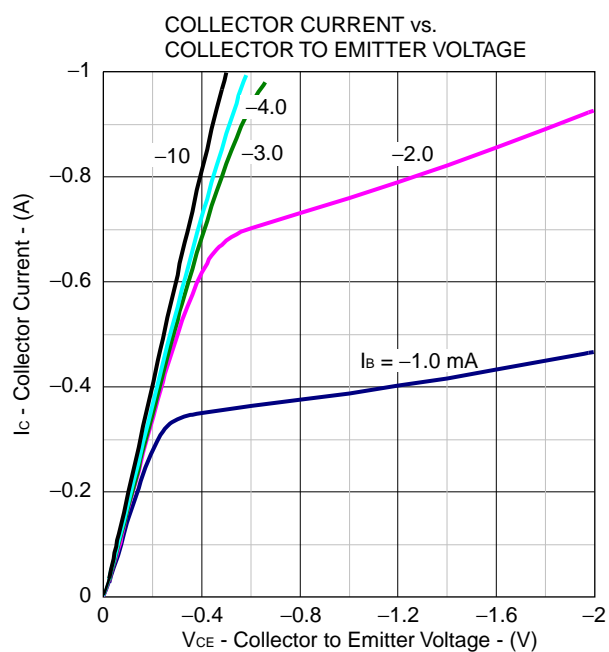
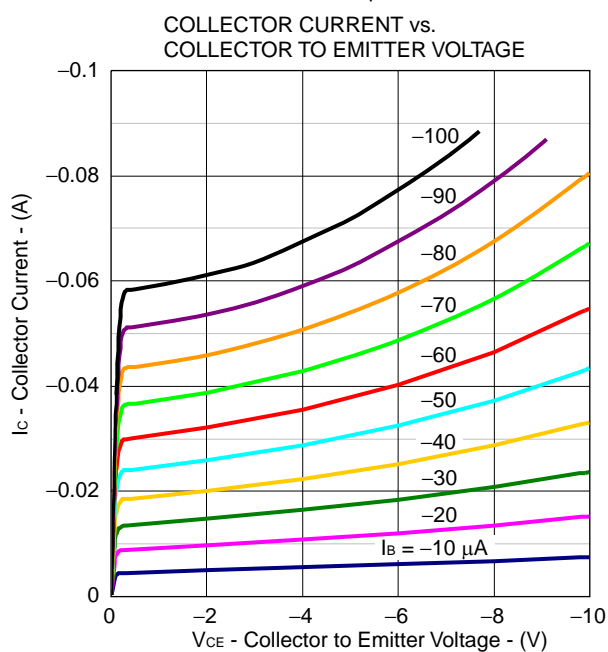
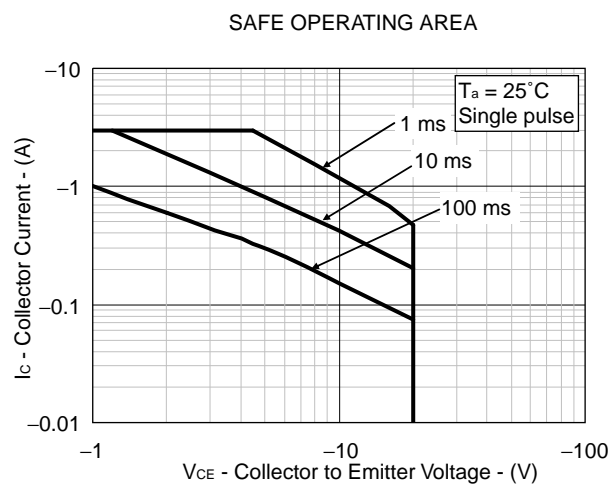
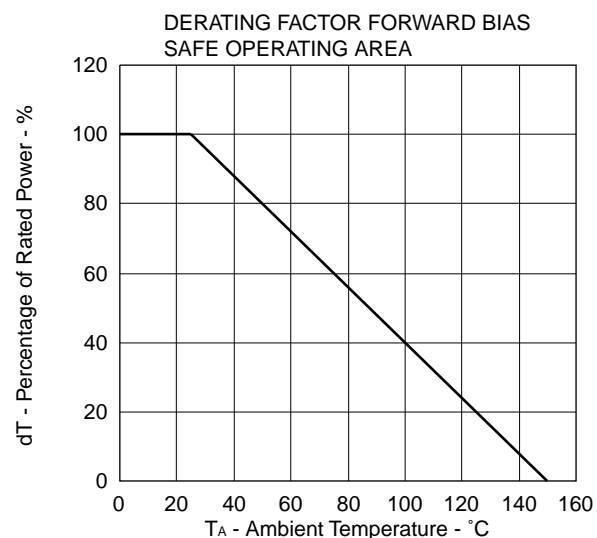
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

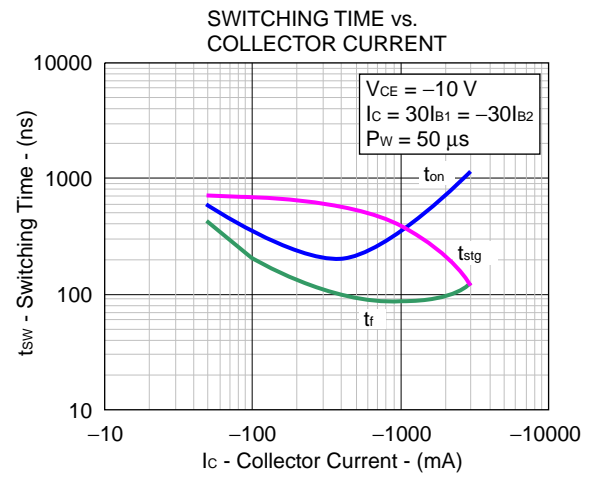
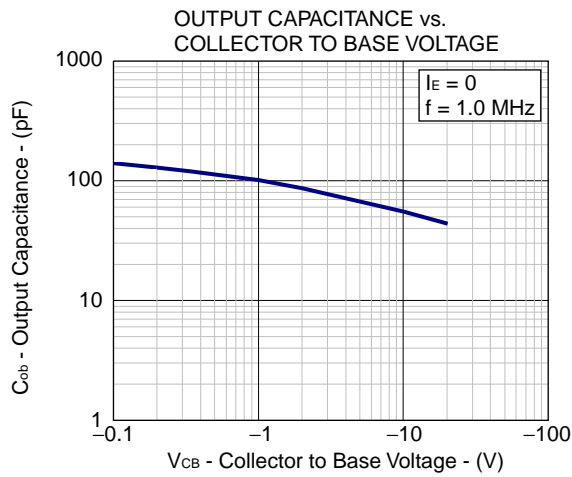
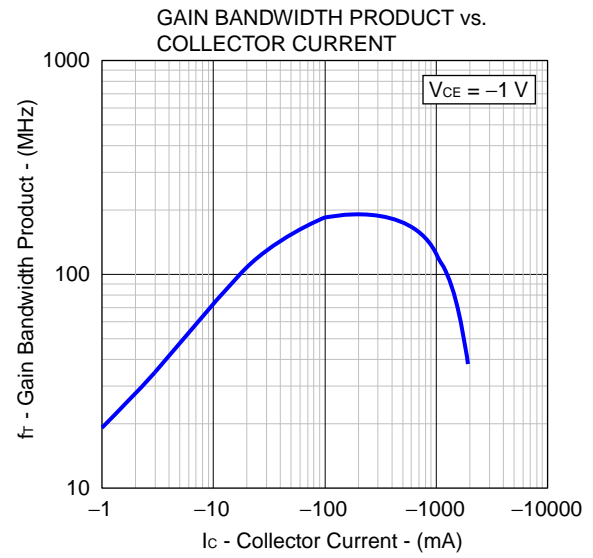
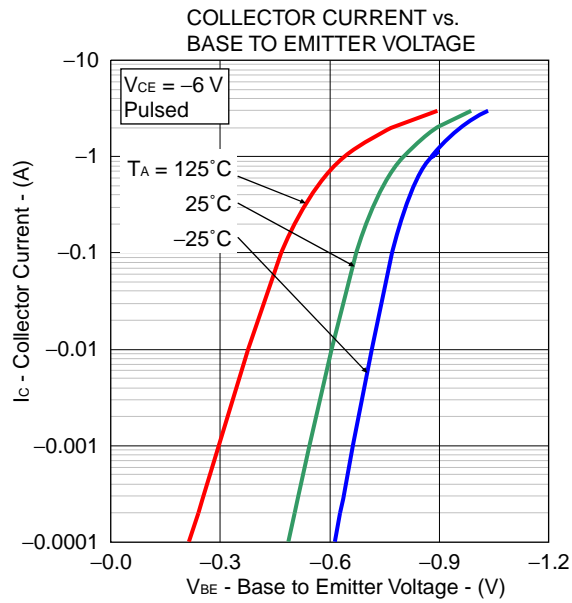
Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = -16\text{ V}$, $I_E = 0$			-100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -6.0\text{ V}$, $I_C = 0$			-100	nA
DC Current Gain	h_{FE1}^{*1}	$V_{CE} = -2.0\text{ V}$, $I_C = -100\text{ mA}$	135	350	600	
DC Current Gain	h_{FE2}^{*1}	$V_{CE} = -2.0\text{ V}$, $I_C = -2.0\text{ A}$	40			
Collector Saturation Voltage	$V_{CE(sat)}^{*1}$	$I_C = -1.5\text{ A}$, $I_B = -50\text{ mA}$		-0.3	-0.5	V
Base Saturation Voltage	$V_{BE(sat)}^{*1}$	$I_C = -1.5\text{ A}$, $I_B = -50\text{ mA}$		-1.05	-1.2	V
Base to Emitter Voltage	V_{BE}^{*1}	$V_{CE} = -6\text{ V}$, $I_C = -100\text{ mA}$	-650	-680	-750	mV
Gain Bandwidth Product	f_T	$V_{CE} = -6.0\text{ V}$, $I_E = 10\text{ mA}$		90		MHz
Output Capacitance	C_{ob}	$V_{CB} = -10.0\text{ V}$, $I_E = 0$, $f = 1.0\text{ MHz}$		55		pF

Note *1. Pulsed

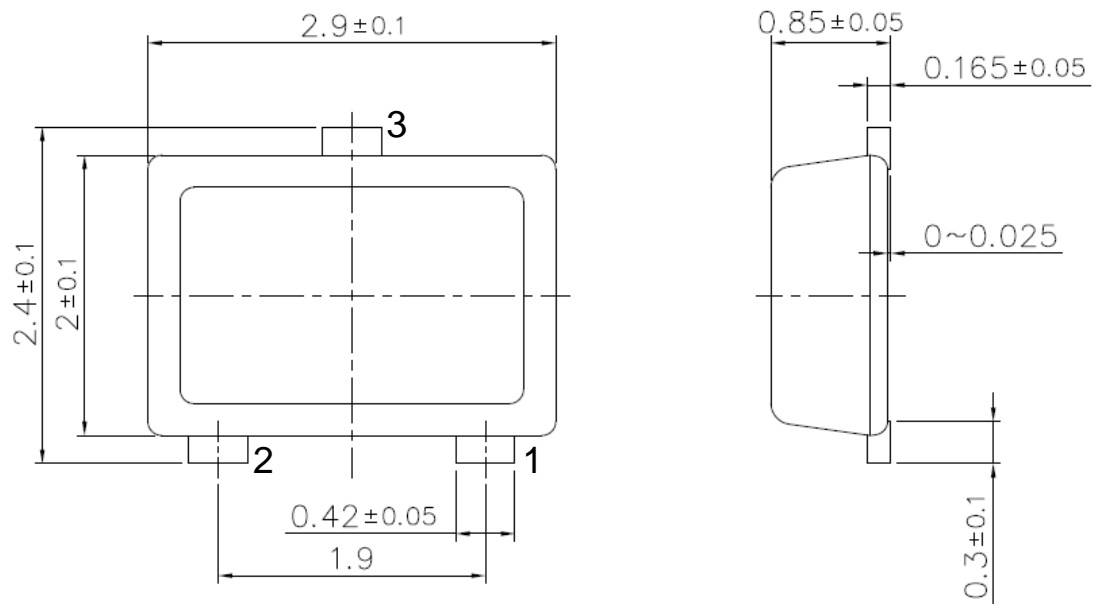
h_{FE} Classification

Marking	ZM	ZL	ZK
h_{FE1}	135 to 270	200 to 400	300 to 600

TYPICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)



PACKAGE DRAWING (Unit: mm)



- 1: Emitter
2: Base
3: Collector

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