

N0201S

R07DS0719EJ0100

Rev.1.00

NPN SILICON EPITAXIAL TRANSISTOR

Mar 30, 2012

FEATURES

- Complements to N0201R.
- $V_{CE0} = 30\text{ V}$
- $I_{C(DC)} = 1.0\text{ A}$
- Miniature package SOT-23F (2SD999: Package variation of 3pPoMM)

PRODUCT LINEUP

Part Number	Packing	Package Name	Package Code	Mass [TYP.]
N0201S-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}	30	V
Collector to Emitter Voltage	V_{CEO}	25	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current (DC)	$I_{C(DC)}$	1.0	A
Collector Current (pulse) *1	$I_{C(pulse)}$	1.5	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 ($T_a = 25^\circ\text{C}$)

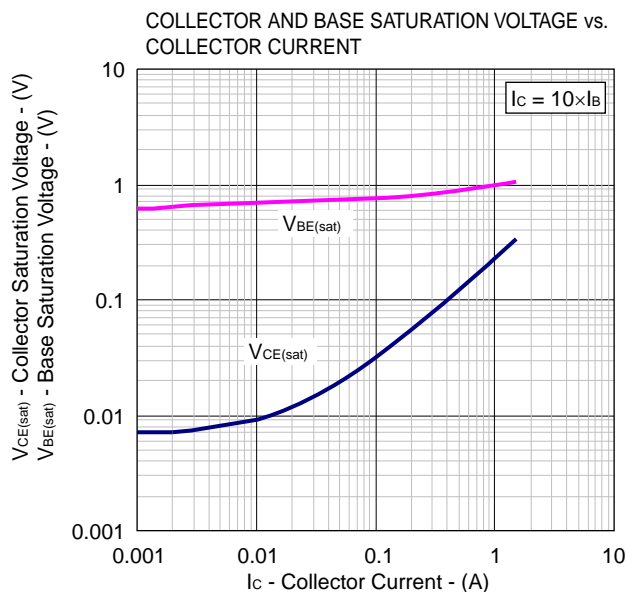
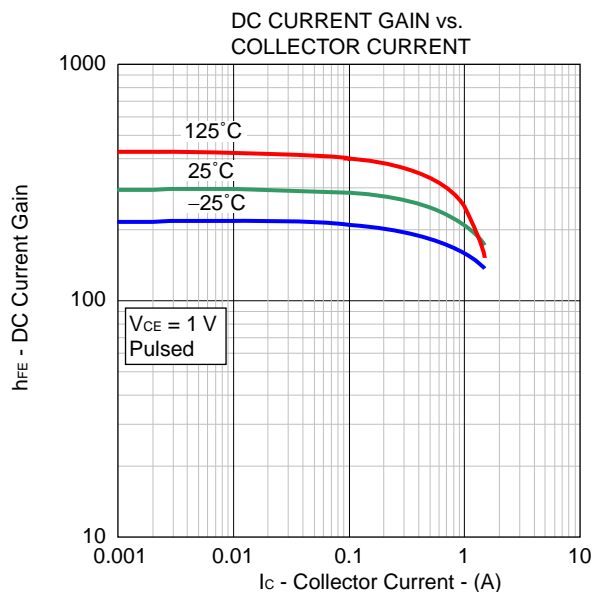
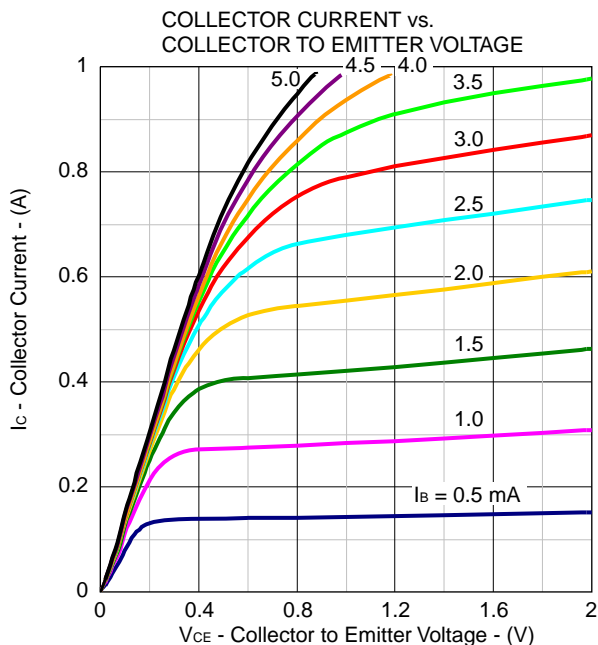
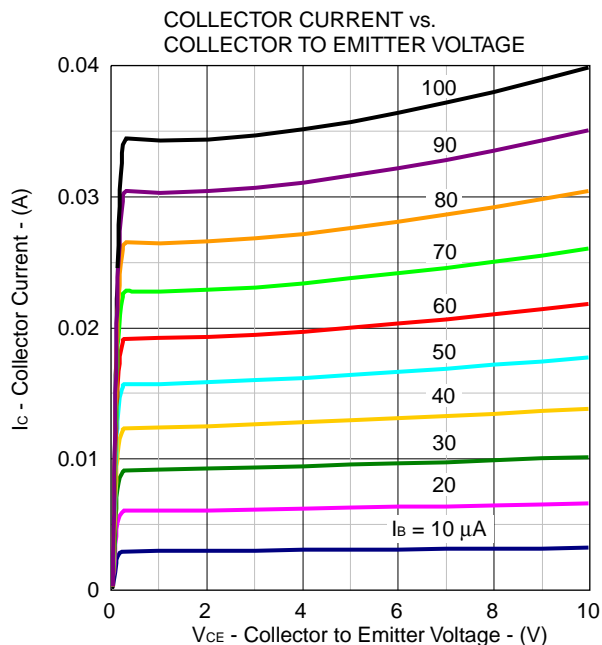
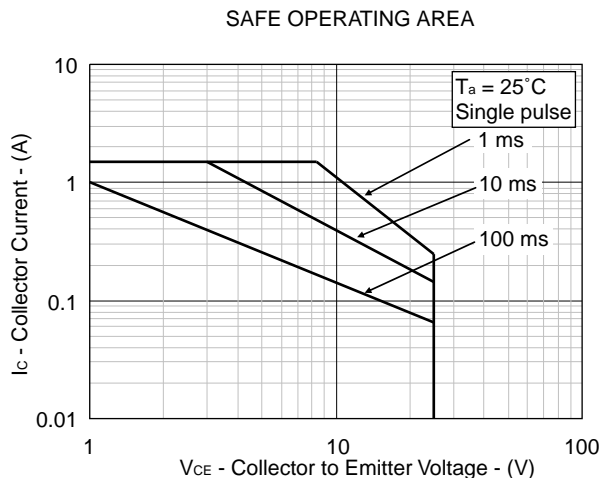
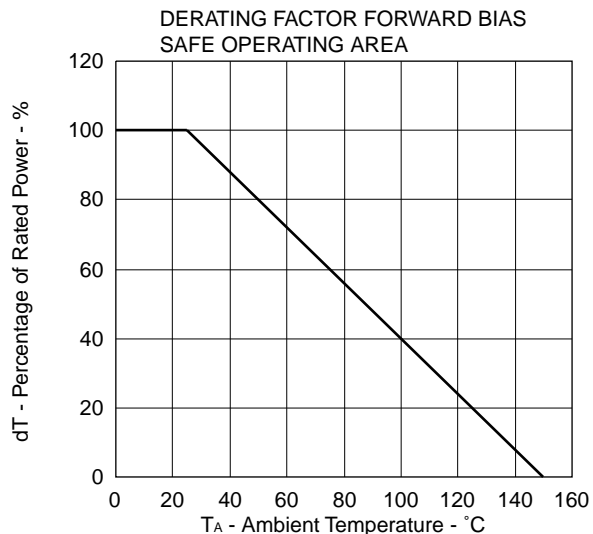
Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 30\text{ V}$, $I_E = 0$			100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5.0\text{ V}$, $I_C = 0$			100	nA
DC Current Gain	h_{FE1}^{*1}	$V_{CE} = 1.0\text{ V}$, $I_C = 100\text{ mA}$	90	200	400	
DC Current Gain	h_{FE2}^{*1}	$V_{CE} = 1.0\text{ V}$, $I_C = 1.0\text{ A}$	50	140		
Collector Saturation Voltage	$V_{CE(sat)}^{*1}$	$I_C = 1.0\text{ A}$, $I_B = 100\text{ mA}$		0.21	0.4	V
Base Saturation Voltage	$V_{BE(sat)}^{*1}$	$I_C = 1.0\text{ A}$, $I_B = 100\text{ mA}$		1.0	1.2	V
Base to Emitter Voltage	V_{BE}^{*1}	$V_{CE} = 6.0\text{ V}$, $I_C = 10\text{ mA}$	600	630	700	mV
Gain Bandwidth Product	f_T	$V_{CE} = 6.0\text{ V}$, $I_E = -10\text{ mA}$		100		MHz
Output Capacitance	C_{ob}	$V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1.0\text{ MHz}$		18		pF

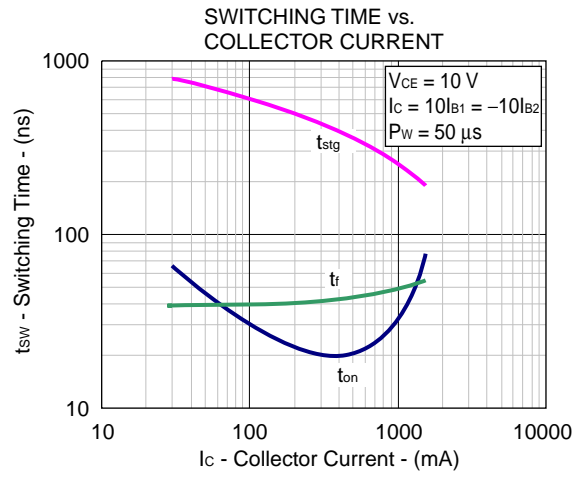
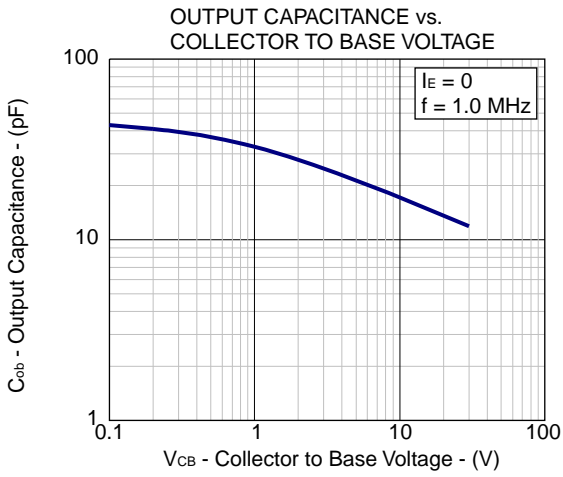
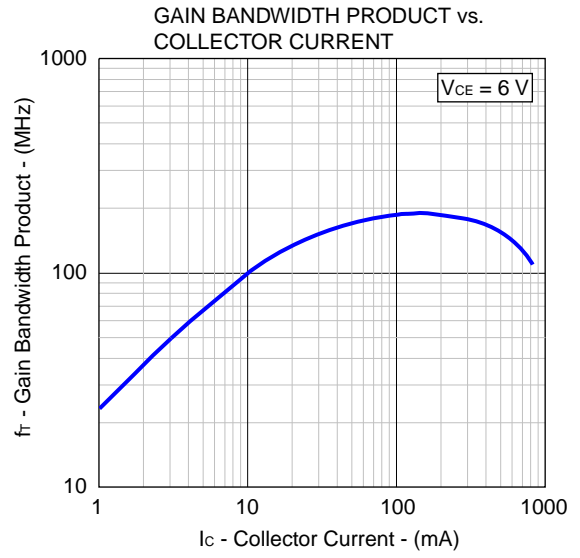
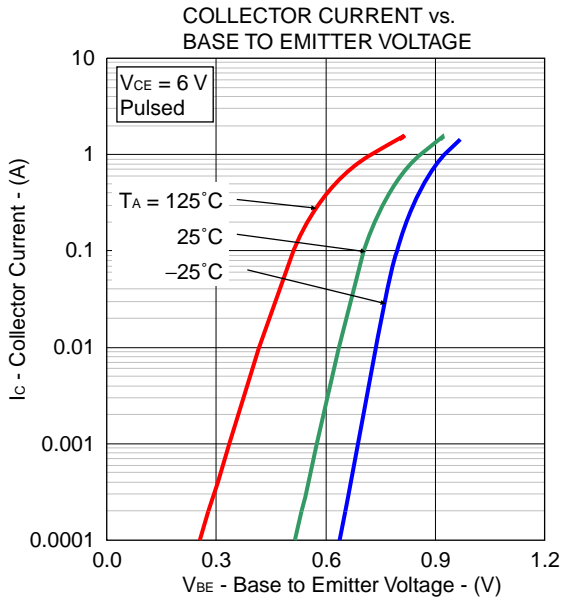
Note *1. Pulsed

h_{FE} Classification

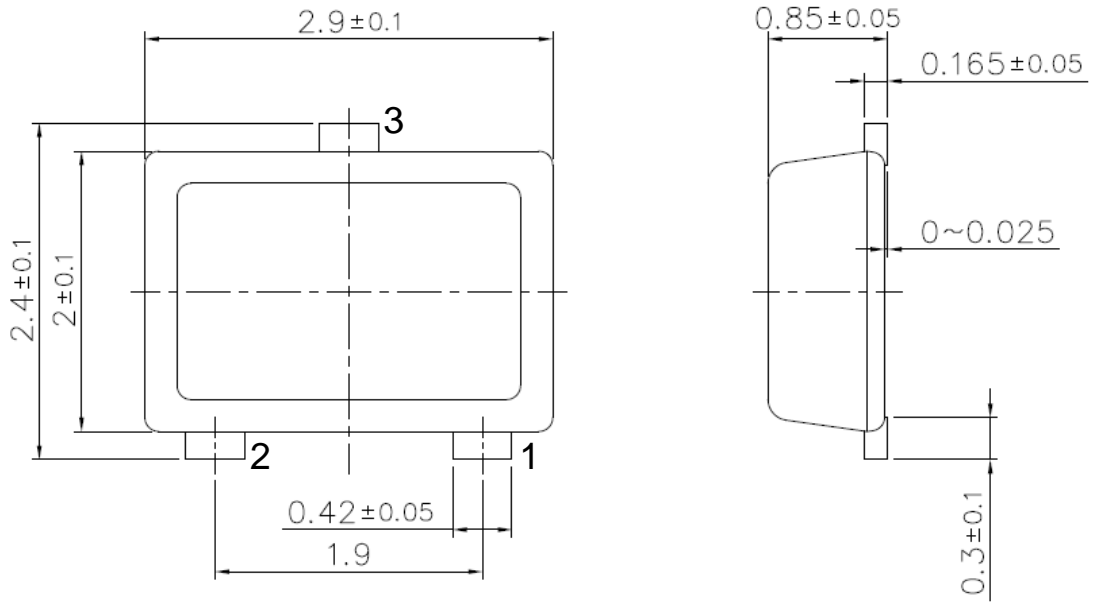
Marking	CM	CL	CK
h_{FE1}	90 to 180	135 to 270	200 to 400

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





PACKAGE DRAWING (Unit: mm)



- 1: Emitter
- 2: Base
- 3: Collector

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