

N0500R

R07DS0722EJ0100

Rev.1.00

Mar 30, 2012

PNP SILICON EPITAXIAL TRANSISTOR

FEATURES

- Complements to N0500S.
- $V_{CE0} = -50$ V
- $I_{C(DC)} = -0.7$ A
- Miniature package SOT-23F (2SB799: Package variation of 3pPoMM)

PRODUCT LINEUP

Part Number	Packing	Package Name	Package Code	Mass [TYP.]
N0500R-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}	-60	V
Collector to Emitter Voltage	V_{CEO}	-50	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collector Current (DC)	$I_{C(DC)}$	-0.7	A
Collector Current (pulse) *1	$I_{C(pulse)}$	-1.0	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. $PW \leq 10$ ms, Duty Cycle $\leq 50\%$

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

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

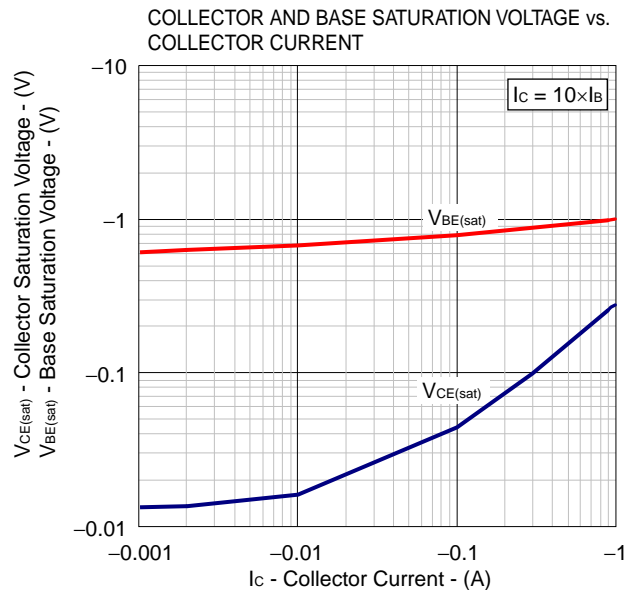
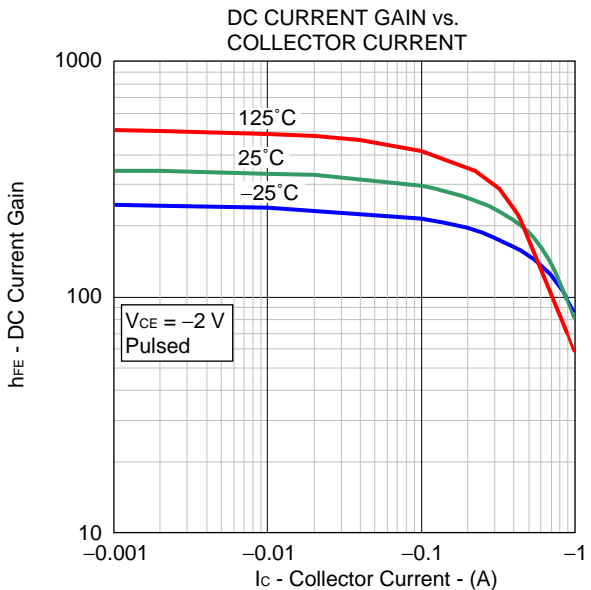
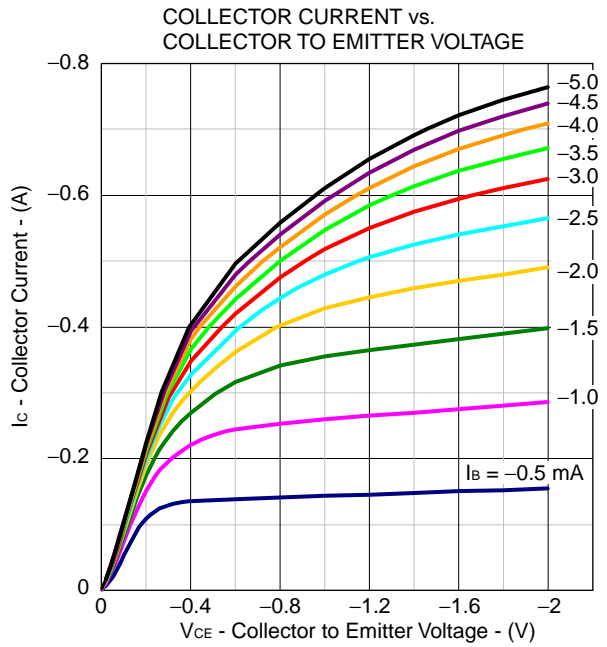
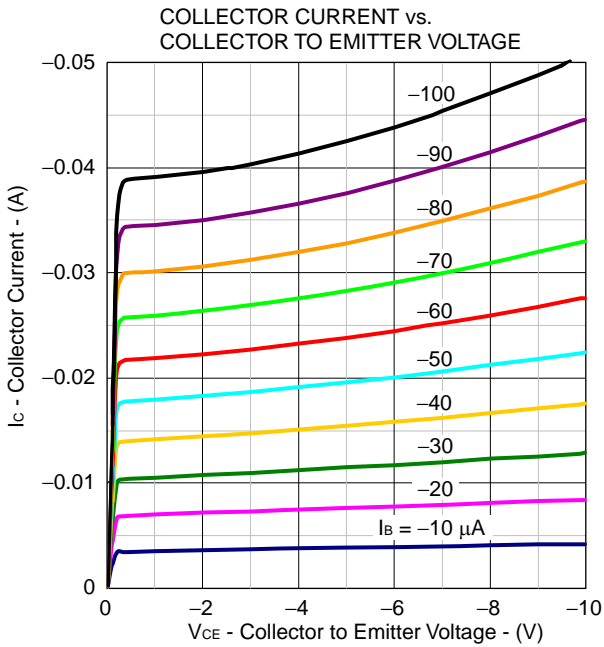
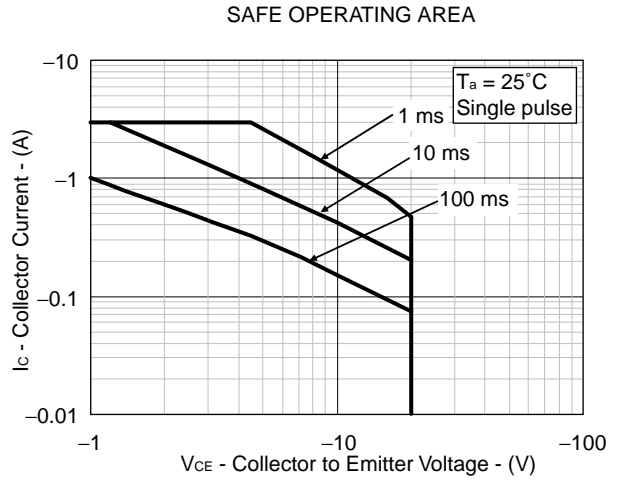
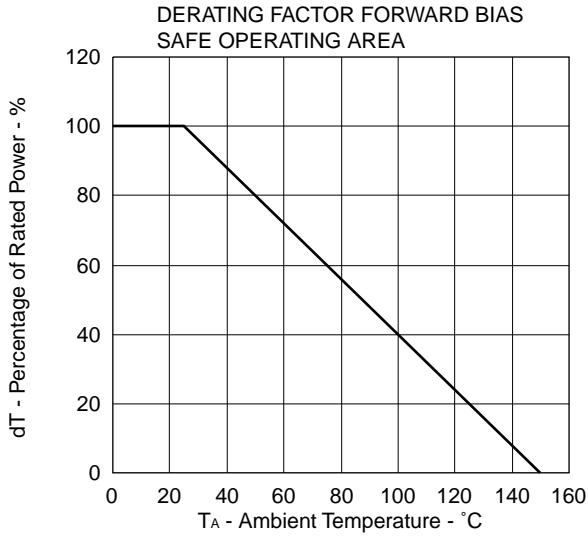
Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = -60\text{ V}$, $I_E = 0$			-100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -5.0\text{ V}$, $I_C = 0$			-100	nA
DC Current Gain	h_{FE1}^{*1}	$V_{CE} = -1.0\text{ V}$, $I_C = -100\text{ mA}$	90	200	400	
DC Current Gain	h_{FE2}^{*1}	$V_{CE} = -1.0\text{ V}$, $I_C = -500\text{ mA}$	50	120		
Collector Saturation Voltage	$V_{CE(sat)}^{*1}$	$I_C = .500\text{ mA}$, $I_B = -50\text{ mA}$		-0.16	-0.4	V
Base Saturation Voltage	$V_{BE(sat)}^{*1}$	$I_C = -500\text{ mA}$, $I_B = -50\text{ mA}$		-0.90	-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}	$V_{CB} = -10\text{ V}$, $I_E = 0$, $f = 1.0\text{ MHz}$		16		pF

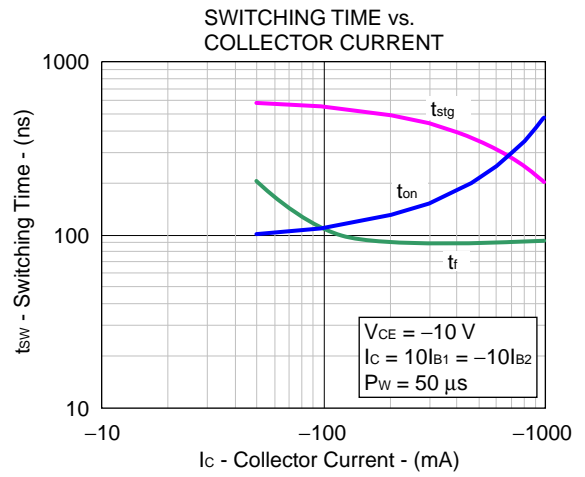
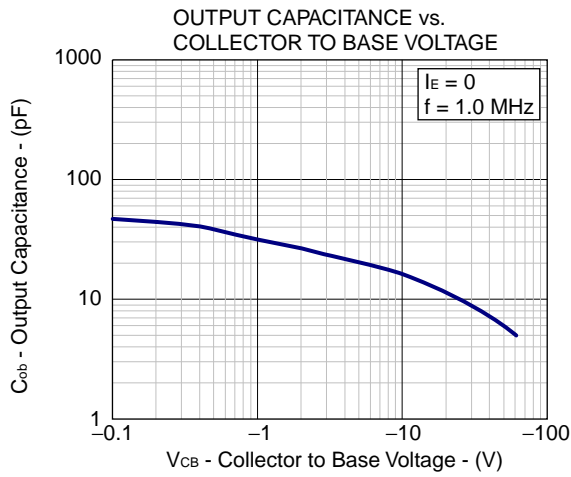
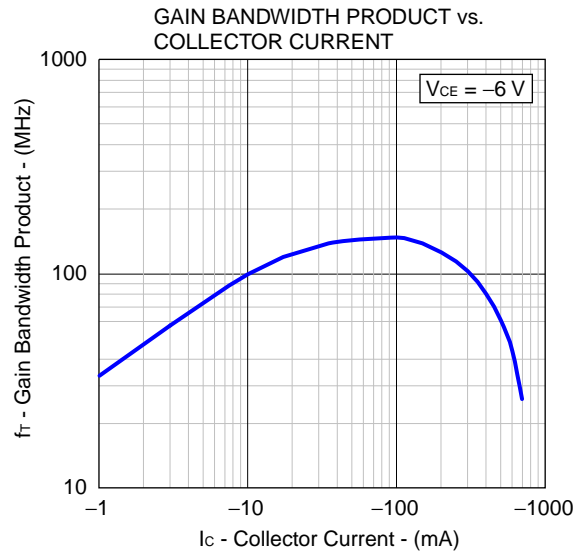
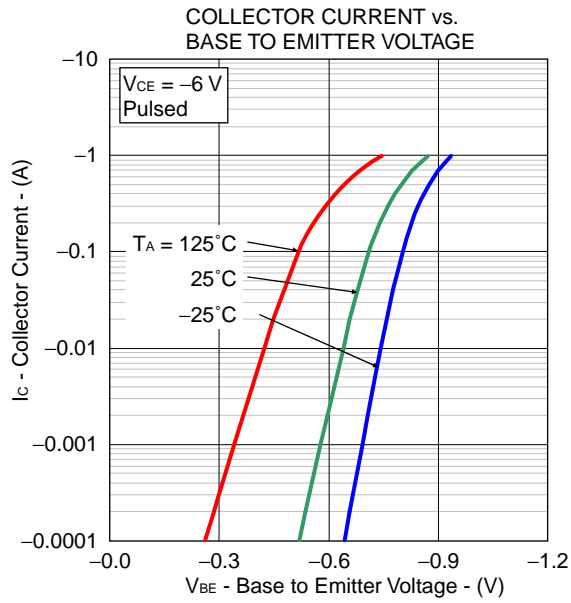
Note *1. Pulsed

h_{FE} Classification

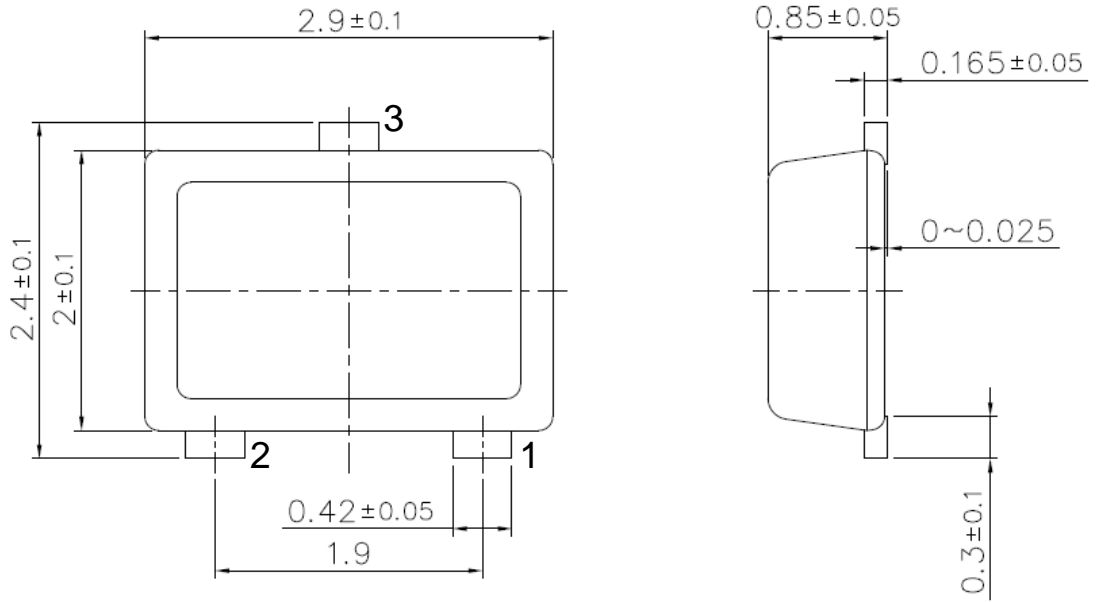
Marking	MM	ML	MK
h_{FE1}	90 to 180	135 to 270	200 to 400

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





PACKAGE DRAWING (Unit: mm)



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

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