

N0501S

NPN SILICON EPITAXIAL TRANSISTOR

FEATURES

- Complements to N0501R.
- $V_{CEO} = 50 \text{ V}$
- $I_{C(DC)} = 1.0 \text{ A}$
- Miniature package SOT-23F (2SD1615: Package variation of 3pPoMM)

PRODUCT LINEUP

Part Number	Packing	Package Name	Package Code	Mass [TYP.]
N0501S-T1-AT	Tape 3000p/reel	SOT-23F	PVSF0003ZA-A	0.0126g

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

Symbol	Ratings	Unit
V _{CBO}	60	V
V _{CEO}	50	V
V _{EBO}	6.0	V
I _{C(DC)}	1.0	А
I _{C(pulse)}	2.0	А
P _{T1}	0.2	W
P _{T2}	1.0	W
Tj	150	°C
T _{stg}	-55 to +150	°C
	V _{CBO} V _{CEO} V _{EBO} I _{C(DC)} I _{C(pulse)} P _{T1} P _{T2} T _j	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

Note *1. PW \leq 10 ms, Duty Cycle \leq 50%

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

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

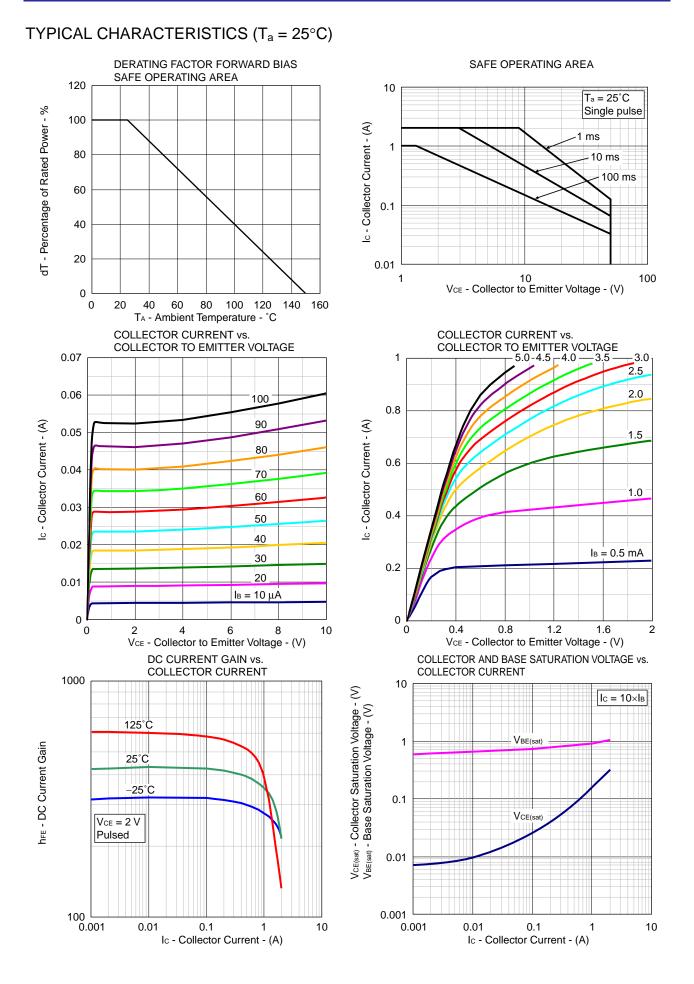
Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Collector Cutoff Current	I _{CBO}	$V_{CB} = 60 \text{ V}, I_E = 0$			100	nA
Emitter Cutoff Current	I _{EBO}	$V_{EB} = 6.0 \text{ V}, I_{C} = 0$			100	nA
DC Current Gain	h _{FE1} * ¹	$V_{CE} = 2.0 \text{ V}, I_{C} = 100 \text{ mA}$	135	290	600	
DC Current Gain	h _{FE2} *1	$V_{CE} = 2.0 \text{ V}, I_{C} = 1.0 \text{ A}$	81	270		
Collector Saturation Voltage	V _{CE(sat)} * ¹	$I_{\rm C} = 1.0$ A, $I_{\rm B} = 50$ mA		0.15	0.3	V
Base Saturation Voltage	V _{BE(sat)} * ¹	$I_{\rm C} = 1.0 \text{ A}, I_{\rm B} = 50 \text{ mA}$		0.9	1.2	V
Base to Emitter Voltage	V _{BE} * ¹	$V_{CE} = 2.0 \text{ V}, I_{C} = 50 \text{ mA}$	600		700	mV
Gain Bandwidth Product	f _T	$V_{CE} = 2.0 \text{ V}, I_E = -100 \text{ mA}$		150		MHz
Output Capacitance	C _{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1.0 \text{ MHz}$		20		pF

Note *1. Pulsed

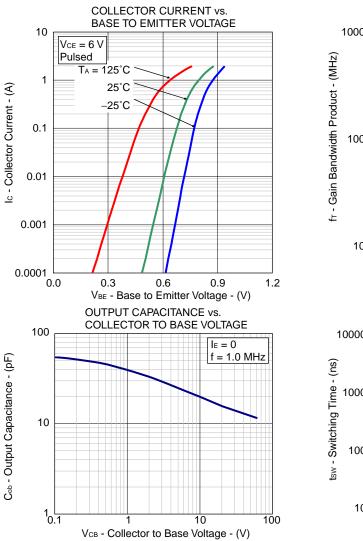
h_{FE} Classification

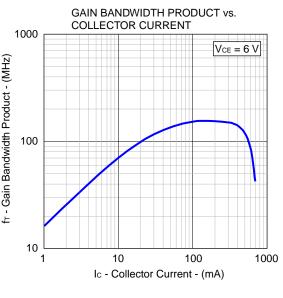
Marking	GM	GL	GK
hFE1	135 to 270	200 to 400	300 to 600

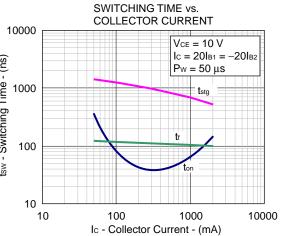






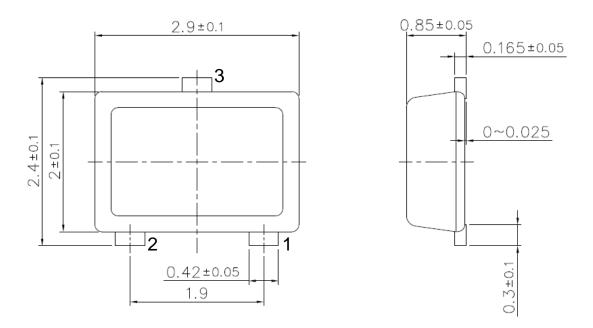








PACKAGE DRAWING (Unit: mm)



1: Emitter

2: Base

3: Collector



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