

N0800S

NPN SILICON EPITAXIAL TRANSISTOR

R07DS0727EJ0100 Rev.1.00 Mar 30, 2012

FEATURES

- Complements to N0800R.
- $\bullet \quad V_{CEO} = 80 \ V$
- $I_{C(DC)} = 0.3 \text{ A}$
- Miniature package SOT-23F (2SD1005: Package variation of 3pPoMM)

PRODUCT LINEUP

Part Number	Packing	Package Name	Package Code	Mass [TYP.]
N0800S-T1-AT	Tape 3000p/reel	SOT-23F	PVSF0003ZA-A	0.0126g

ABSOLUTE MAXIMUM RATINGS ($T_a = 25$ °C)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	80	V
Collector to Emitter Voltage	V_{CEO}	80	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current (DC)	I _{C(DC)}	0.3	Α
Collector Current (pulse) *1	I _{C(pulse)}	0.5	Α
Total Power Dissipation	P _{T1}	0.2	W
Total Power Dissipation *2	P _{T2}	1.0	W
Junction Temperature	Tj	150	°C
Storage Temperature	T _{stg}	−55 to +150	°C

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

ELECTRICAL CHARACTERISTICS (T_a = 25°C)

Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Collector Cutoff Current	I _{CBO}	$V_{CB} = 80 \text{ V}, I_{E} = 0$			100	nA
Emitter Cutoff Current	I _{EBO}	$V_{EB} = 5.0 \text{ V}, I_{C} = 0$			100	nA
DC Current Gain	h _{FE1} *1	$V_{CE} = 1.0 \text{ V}, I_{C} = 50 \text{ mA}$	90	200	400	
DC Current Gain	h _{FE2} *1	$V_{CE} = 2.0 \text{ V}, I_{C} = 300 \text{ mA}$	30	80		
Collector Saturation Voltage	V _{CE(sat)} *1	$I_C = 300 \text{ mA}, I_B = 30 \text{ mA}$		0.15	0.6	V
Base Saturation Voltage	V _{BE(sat)} *1	$I_C = 300 \text{ mA}, I_B = 30 \text{ mA}$		0.86	1.2	V
Base to Emitter Voltage	V _{BE} * ¹	$V_{CE} = 6.0 \text{ V}, I_{C} = 10 \text{ mA}$	600	645	700	mV
Gain Bandwidth Product	f _T	$V_{CE} = 6.0 \text{ V}, I_{E} = -10 \text{ mA}$		100		MHz
Output Capacitance	C _{ob}	$V_{CB} = 10 \text{ V}, I_{E} = 0, f = 1.0 \text{ MHz}$		6		pF

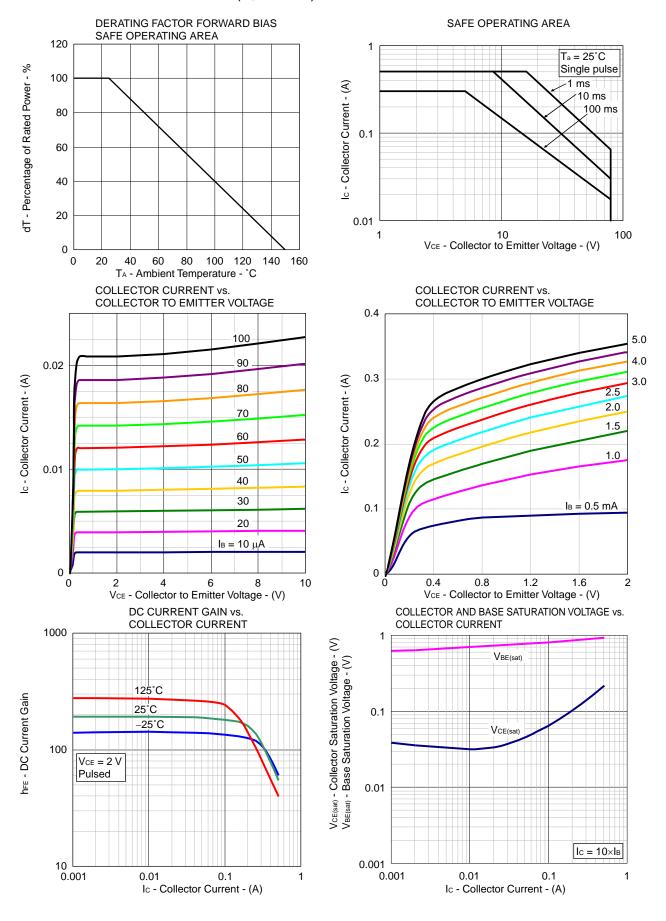
Note *1. Pulsed

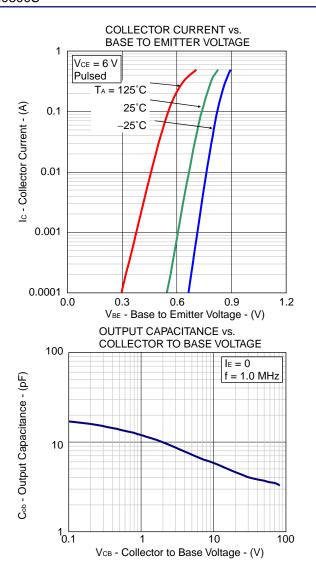
h_{FE} Classification

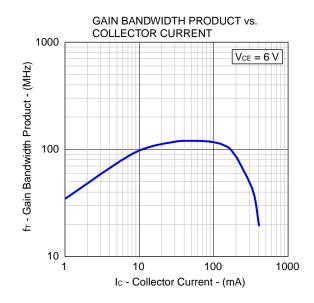
Marking	EM	EL	EK
hFE1	90 to 180	135 to 270	200 to 400

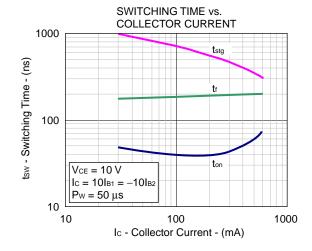
^{*2.} FR-4 board size 2500 mm 2 × 1.6 mm, t ≤ 5 sec

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

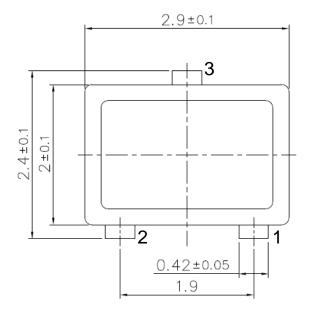


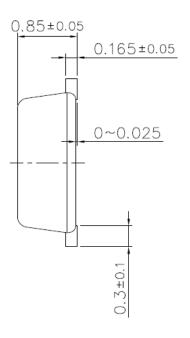






PACKAGE DRAWING (Unit: mm)





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

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