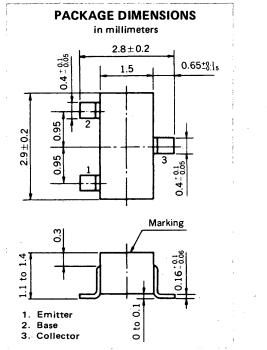
### DATA SHEET

# SILICON TRANSISTOR

# FN1L3Z

## **MEDIUM SPEED SWITCHING RESISTOR BUILT-IN TYPE PNP TRANSISTOR** MINI MOLD



#### **FEATURES**

Resistor Built-in TYPE



B

С

 $R_1 = 4.7 \ k\Omega$ 

Complementary to FA1L3Z

#### **ABSOLUTE MAXIMUM RATINGS**

Maximum Voltages and Currents (T <sub>a</sub> = 25 $^{\circ}$ C)	)		
Collector to Base Voltage	V <sub>CBO</sub>	-60	V
Collector to Emitter Voltage	V <sub>CEO</sub>	-50	V.
Emitter to Base Voltage	V <sub>EBO</sub>	5	V
Collector Current (DC)	lc	-100	mΑ
Collector Current (Pulse)	I <sub>C</sub>	-200	mΑ
Maximum Power Dissipation			
Total Power Dissipation			
at 25 °C Ambient Temperature	PT	200	mW
Maximum Temperatures			
Junction Temperature	Тj	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C

#### ELECTRICAL CHARACTERISTICS ( $T_a = 25$ °C)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS	
Collector Cutoff Current	Ісво			-100	nA	$V_{CB} = -50 V, I_{E} = 0$	
DC Current Gain	<sup>h</sup> FE1 <sup>*</sup>	135	260	600		$V_{CE} = -5.0 \text{ V}, \text{ I}_{C} = -5.0 \text{ mA}$	
DC Current Gain	<sup>h</sup> FE2 <sup>*</sup>	100	200			V <sub>CE</sub> = -5.0 V, I <sub>C</sub> = -50 mA	
Collector Saturation Voltage	VCE(sat)*		-0.04	0.2	v	I <sub>C</sub> =5.0 mA, I <sub>B</sub> =0.25 mA	
Low-Level Input Voltage	VIL*		-0.57	-0.5	v	$V_{CE} = -5.0 V, I_{C} = -100 \mu A$	
High-Level Input Voltage	VIH*	-1.2	-0.75		v	$V_{CE} = -0.2 V, I_{C} = -5.0 mA$	
Input Resistor	R <sub>1</sub>	3.29	4.70	6.11	kΩ	·	
Turn-on Time	ton		0.04	0.2	μs	$V_{CC}$ = −5 V, $V_{in}$ = −5 V $R_L$ = 1 kΩ PW = 2 µs, Duty Cycle ≤ 2 %	
Storage Time	t <sub>stg</sub>		1.7	5.0	μs		
Turn-off Time	toff		1.9	6.0	μs		

\* Pulsed: PW  $\leq$  350  $\mu$ s, Duty Cycle  $\leq$  2 %

#### h<sub>FE</sub> Classification

Marking	M36	M37	M38
hFE1	135 to 270	200 to 400	300 to 600

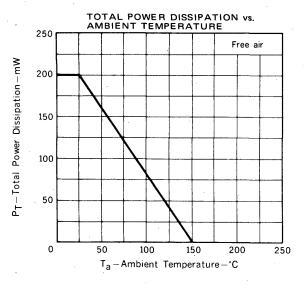
NEC cannot assume any responsibility for any circuits shown or represent that they are free from patent infringement.

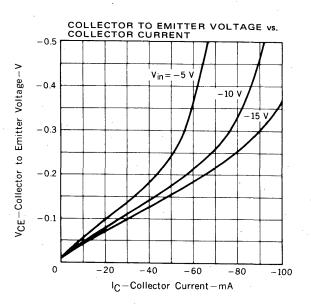
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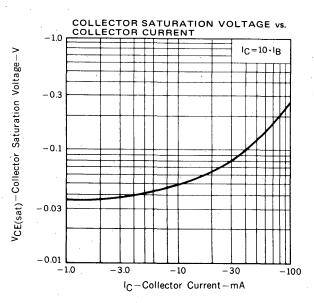
NEC ELECTRON DEVICE

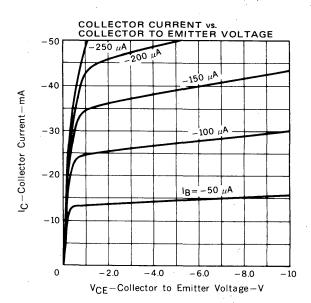
#### TYPICAL CHARACTERISTIS ( $T_a = 25$ °C)

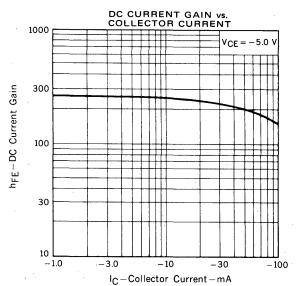
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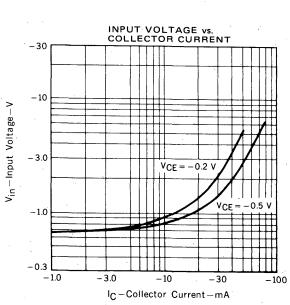








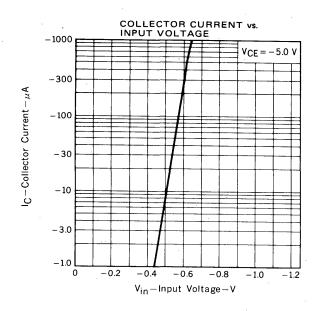


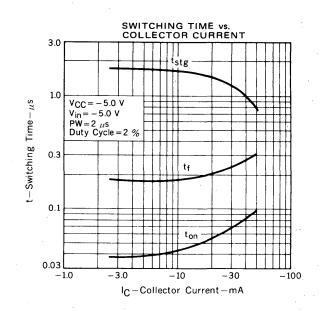


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