

To our customers,

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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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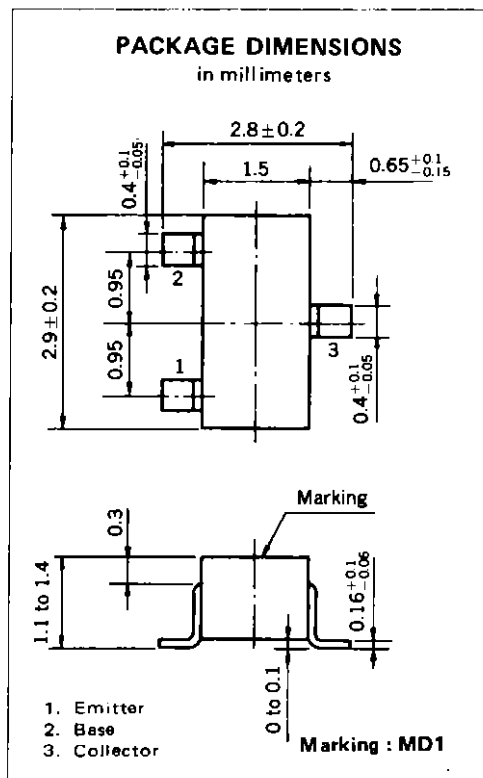
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KEY MATRIX CONNECTION SWITCHING

DIODE AND RESISTOR BUILT-IN TYPE PNP TRANSISTOR

MINI MOLD

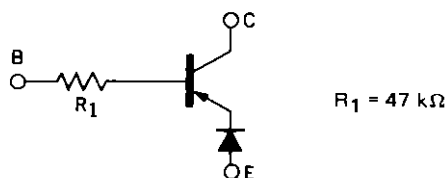


DESCRIPTION

The FN3L4Z is Diode and Resistor Built-in type PNP transistor designed for transistor switch of Key Matrix Connection.

FEATURES

- Built-in Diode block reverse current



- Complementary to FA3L4Z

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Current ($T_a = 25^\circ\text{C}$)

Collector to Base Voltage	V_{CBO}	-20	V
Collector to Emitter Voltage	V_{CEO}	-20	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collector Current (DC)	I_C	-20	mA
Reverse Voltage (Diode)	V_R	6	V

Maximum Power Dissipation

Total Power Dissipation at 25°C Ambient Temperature	P_T	200	mW
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Maximum Temperatures

Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

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

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I_{CBO}			-100	nA	$V_{CB} = -20 \text{ V}, I_E = 0$
Diode Reverse Current	I_{ECX}			-1.0	μA	$V_I = -5 \text{ V}, V_{EC} = -5.5 \text{ V}$
DC Current Gain	h_{FE}^*	30	120			$V_{CE} = -5.0 \text{ V}, I_C = -1.0 \text{ mA}$
Collector Saturation Voltage	$V_{CE(sat)1}^*$		-0.8	-1.0	V	$I_C = -0.1 \text{ mA}, I_B = -0.01 \text{ mA}$
Collector Saturation Voltage	$V_{CE(sat)2}^*$		-1.0	-1.2	V	$I_C = -1.0 \text{ mA}, I_B = -0.1 \text{ mA}$
Input Resistor	R_1	32.9	47.0	61.1	$\text{k}\Omega$	

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

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

