

# SILICON TRANSISTOR

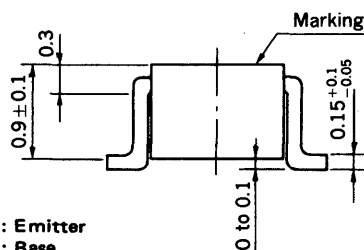
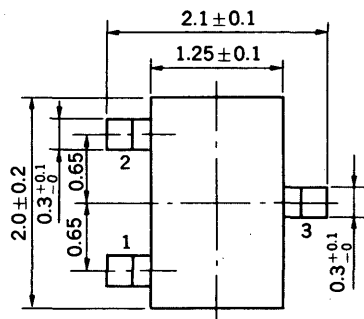
## GN1A4P

### MEDIUM SPEED SWITCHING

### RESISTOR BUILT-IN TYPE PNP TRANSISTOR

#### PACKAGE DIMENSIONS

in millimeters

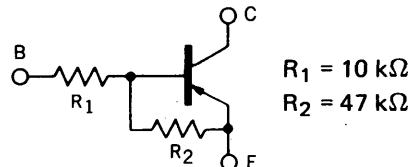


1 : Emitter  
2 : Base  
3 : Collector

Marking: M34

#### FEATURES

- Resistors Built-in TYPE



- Complementary to GA1A4P

#### ABSOLUTE MAXIMUM RATINGS

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

Collector to Base Voltage	$V_{CB0}$	-60	V
Collector to Emitter Voltage	$V_{CEO}$	-50	V
Emitter to Base Voltage	$V_{EBO}$	-5	V
Collector Current (DC)	$I_C$	-100	mA
Collector Current (Pulse)	$I_C$	-200	mA

Maximum Power Dissipation

Total Power Dissipation	$P_T$	150	mW
-------------------------	-------	-----	----

at  $25^\circ\text{C}$  Ambient Temperature

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	$I_{CB0}$			-100	nA	$V_{CB} = -50\text{ V}, I_E = 0$
DC Current Gain	$h_{FE1}^*$	85	140	340		$V_{CE} = -5.0\text{ V}, I_C = -5.0\text{ mA}$
DC Current Gain	$h_{FE2}^*$	95	190			$V_{CE} = -5.0\text{ V}, I_C = -50\text{ mA}$
Collector Saturation Voltage	$V_{CE(sat)}^*$		-0.04	-0.2	V	$I_C = -5.0\text{ mA}, I_B = -0.25\text{ mA}$
Low-Level Input Voltage	$V_{IL}^*$		-0.68	-0.5	V	$V_{CE} = -5.0\text{ V}, I_C = -100\text{ }\mu\text{A}$
High-Level Input Voltage	$V_{IH}^*$	-3.0	-1.0		V	$V_{CE} = -0.2\text{ V}, I_C = -5.0\text{ mA}$
Input Resistor	$R_1$	7.0	10.0	13.0	k $\Omega$	
E-B Resistor	$R_2$	32.9	47.0	61.1		
Turn-on Time	$t_{on}$		0.08	0.2	$\mu\text{s}$	$V_{CC} = -5\text{ V}, V_{in} = -5\text{ V}$ $R_L = 1\text{ k}\Omega$ $PW = 2\text{ }\mu\text{s}, \text{Duty Cycle} \leq 2\%$
Storage Time	$t_{stg}$		1.5	5.0	$\mu\text{s}$	
Turn-off Time	$t_{off}$		1.8	6.0	$\mu\text{s}$	

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

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