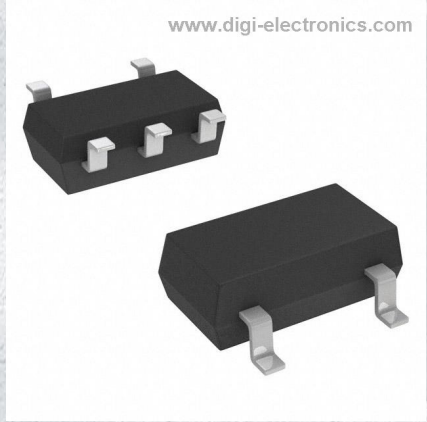
XP0121000L Datasheet



https://www.DiGi-Electronics.com

DiGi Electronics Part Number	XP0121000L-DG
Manufacturer	Panasonic Electronic Components
Manufacturer Product Number	XP0121000L
Description	TRANS 2NPN PREBIAS 0.15W SMINI5
Detailed Description	Pre-Biased Bipolar Transistor (BJT) 2 NPN - Pre-Biased (Dual) 50V 100mA 150MHz 150mW Surface Mount SMini5-G1

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
XP0121000L	Panasonic Electronic Components
Series:	Product Status:
-	Obsolete
Transistor Type:	Current - Collector (Ic) (Max):
2 NPN - Pre-Biased (Dual)	100mA
Voltage - Collector Emitter Breakdown (Max):	Resistor - Base (R1):
50V	47kOhms
Resistor - Emitter Base (R2):	DC Current Gain (hFE) (Min) @ Ic, Vce:
-	160 @ 5mA, 10V
Vce Saturation (Max) @ Ib, Ic:	Current - Collector Cutoff (Max):
250mV @ 300µA, 10mA	500nA
Frequency - Transition:	Power - Max:
150MHz	150mW
Mounting Type:	Package / Case:
Surface Mount	5-TSSOP, SC-70-5, SOT-353
Supplier Device Package:	Base Product Number:
SMini5-G1	XP0121

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
RoHS Compliant	1 (Unlimited)
ECCN:	HTSUS:
EAR99	8541.21.0075

XP01210

Silicon NPN epitaxial planar type

For digital circuits

■ Features

- Two elements incorporated into one package (Emitter-coupled transistors with built-in resistor)
- Reduction of the mounting area and assembly cost by one half

■ Basic Part Number

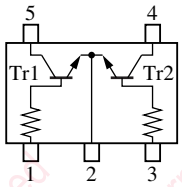
- UNR2210 × 2

■ Package

- Code
  SMini5-G1
- Pin Name
  1: Base (Tr1) 4: Collector (Tr2)
  2: Emitter 5: Collector (Tr1)
  3: Base (Tr2)

■ Marking Symbol: AC

■ Internal Connection



■ Absolute Maximum Ratings $T_a = 25°C$

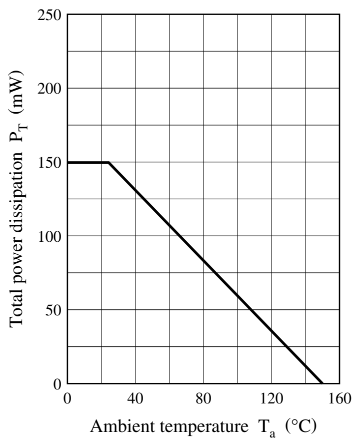
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	50	V
Collector-emitter voltage (Base open)	V_{CEO}	50	V
Collector current	I_C	100	mA
Total power dissipation	P_T	150	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

■ Electrical Characteristics $T_a = 25°C \pm 3°C$

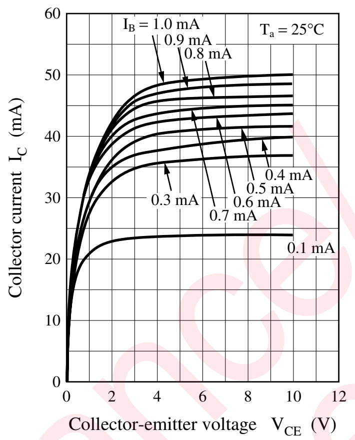
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	I_C = 10 µA, I_E = 0	50			V
Collector-emitter voltage (Base open)	V_{CEO}	I_C = 2 mA, I_B = 0	50			V
Collector-base cutoff current (Emitter open)	I_{CBO}	V_{CB} = 50 V, I_E = 0			0.1	µA
Collector-emitter cutoff current (Base open)	I_{CEO}	V_{CE} = 50 V, I_B = 0			0.5	µA
Emitter-base cutoff current (Collector open)	I_{EBO}	V_{EB} = 6 V, I_C = 0			0.01	mA
Forward current transfer ratio	h_{FE}	V_{CE} = 10 V, I_C = 5 mA	160		460	—
h_{FE} Ratio *	$h_{FE(Small/Large)}$	V_{CE} = 10 V, I_C = 5 mA	0.50	0.99		—
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 10 mA, I_B = 0.3 mA			0.25	V
Output voltage high-level	V_{OH}	V_{CC} = 5 V, V_B = 0.5 V, R_L = 1 kΩ	4.9			V
Output voltage low-level	V_{OL}	V_{CC} = 5 V, V_B = 2.5 V, R_L = 1 kΩ			0.2	V
Input resistance	R_1		−30%	47	+30%	kΩ
Transition frequency	f_T	V_{CB} = 10 V, I_E = −2 mA, f = 200 MHz		150		MHz

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. *: Ratio between 2 elements

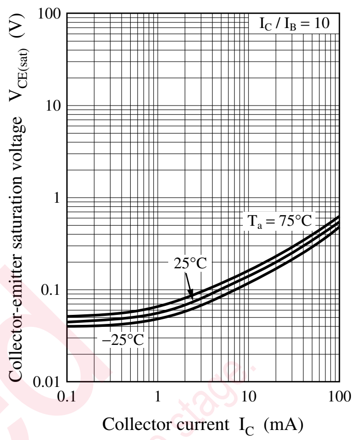
P_T — T_a



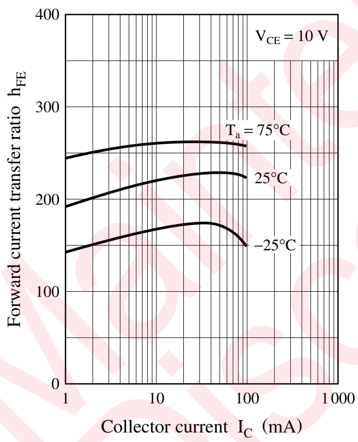
I_C — V_{CE}



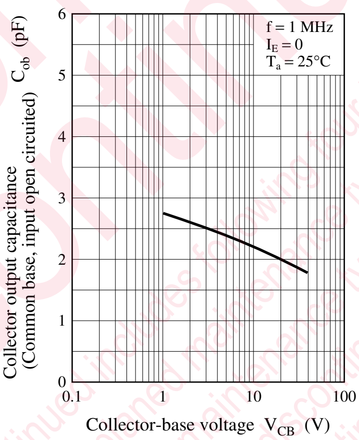
$V_{CE(sat)}$ — I_C



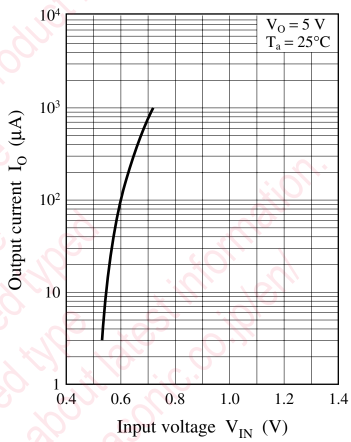
h_{FE} — I_C



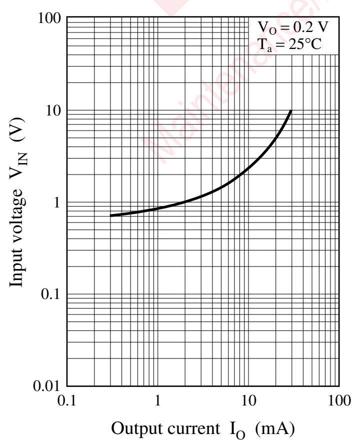
C_{ob} — V_{CB}



I_O — V_{IN}

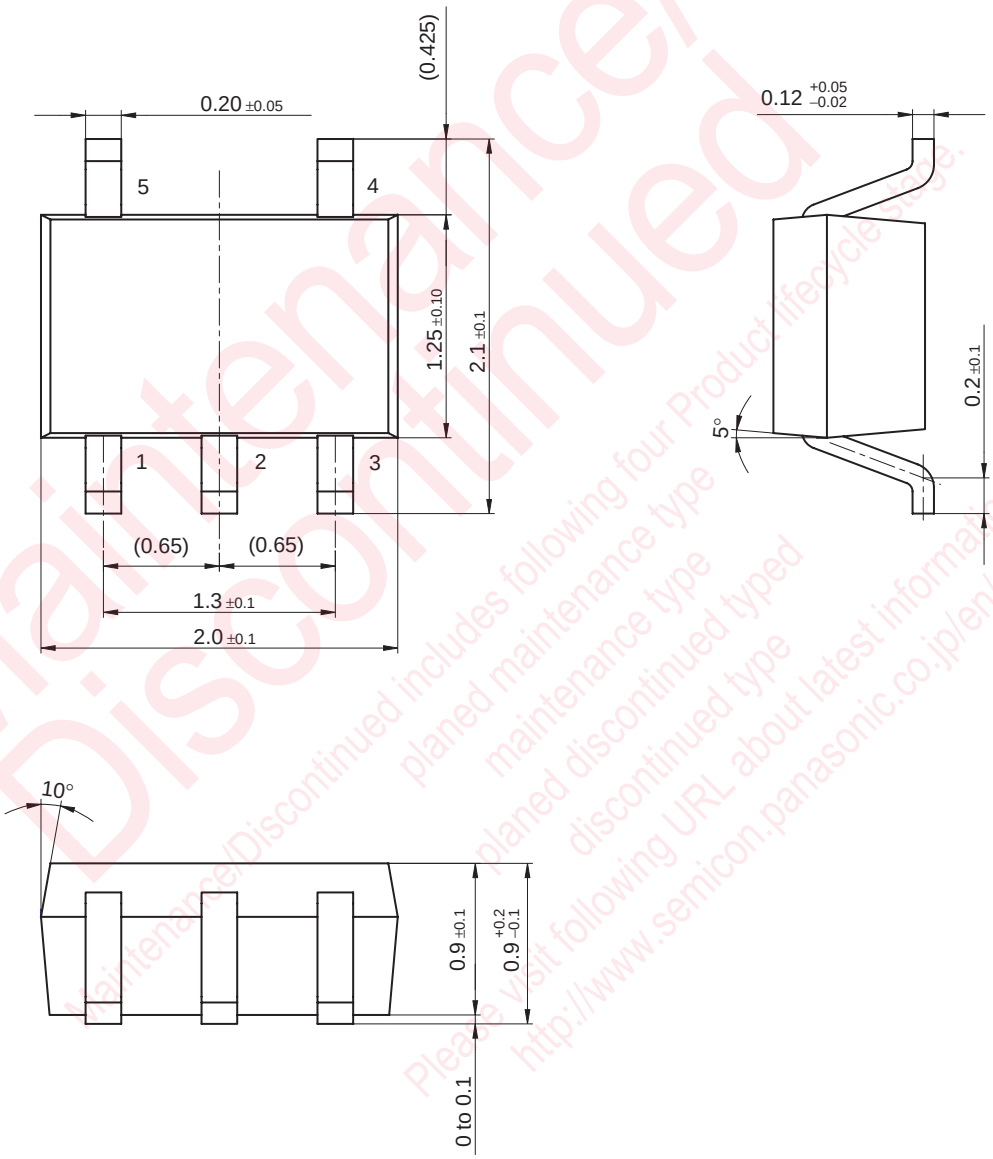


V_{IN} — I_O



SMini5-G1

Unit: mm



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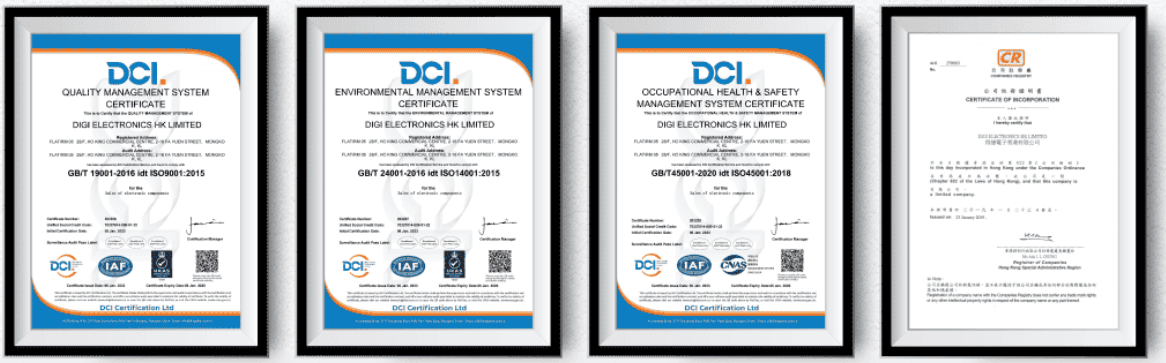

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