2N2605

Silicon PNP Transistor

Data Sheet

Description

SEMICOA Corporation offers:

- Screening and processing per MIL-PRF-19500
- JAN level (2N2605J)
- JANTX level (2N2605JX)
- JANTXV level (2N2605JV)
- QCI to the applicable level
- 100% die visual inspection per MIL-STD-750 method 2072 for JANTXV
- Radiation testing (total dose) upon request

Please contact SEMICOA for special configurations
www.***SEMICOA***.com or (714) 979-1900

Applications

- Noise-level amplifier circuits
- Low power
- PNP silicon transistor

Features

- Hermetically sealed TO-46 metal can
- Also available in chip configuration
- Chip geometry 0220
- Reference document: MIL-PRF-19500/354

Benefits

- Qualification Levels: JAN, JANTX, and JANTXV
- Radiation testing available

Absolute Maximum Ratings			T_C = 25°C unless otherwise specified
Parameter	**Symbol**	**Rating**	**Unit**
Collector-Emitter Voltage	V_{CEO}	60	Volts
Collector-Base Voltage	V_{CBO}	70	Volts
Emitter-Base Voltage	V_{EBO}	6	Volts
Collector Current, Continuous	I_C	30	mA
Power Dissipation, T_A = 25°C Derate linearly above 25°C	P_T	400 2.28	mW mW/°C
Thermal Resistance	$R_{\theta JA}$	437	°C/W
Operating Junction Temperature Storage Temperature	T_J T_{STG}	-65 to +200	°C

SEMICOA Corporation
333 McCormick Avenue, Costa Mesa, California 92626 714.979.1900, FAX 714.557.4541
www.*SEMICOA*.com

ELECTRICAL CHARACTERISTICS

characteristics specified at T_A = 25°C

Off Characteristics

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 10 mA	60			Volts
Collector-Base Cutoff Current	I_{CBO1} I_{CBO2}	V_{CB} = 70 Volts V_{CB} = 50 Volts V_{CB} = xx Volts, T_A = xxx°C			10 10	µA nA
Collector-Emitter Cutoff Current	I_{CES}	V_{CE} = 50 Volts			10	nA
Emitter-Base Cutoff Current	I_{EBO1} I_{EBO2}	V_{EB} = 6 Volts V_{EB} = 5 Volts			10 2	µA nA

On Characteristics

Pulse Test: Pulse Width = 300 µs, Duty Cycle ≤ 2.0%

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
DC Current Gain	h_{FE1} h_{FE2} h_{FE3} h_{FE4}	I_C = 10 µA, V_{CE} = 5 Volts I_C = 500 µA, V_{CE} = 5 Volts I_C = 10 mA, V_{CE} = 5 Volts I_C = 10 µA, V_{CE} = 5 Volts T_A = -55°C	100 150 100 30		300 450 400	
Base-Emitter Saturation Voltage	V_{BEsat1}	I_C = 10 mA, I_B = 500 µA	0.7		0.9	Volts
Collector-Emitter Saturation Voltage	V_{CEsat1}	I_C = 10 mA, I_B = 500 µA			0.3	Volts

Dynamic Characteristics

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Magnitude – Common Emitter, Short Circuit Forward Current Transfer Ratio	$\|h_{FE}\|$	V_{CE} = 5 Volts, I_C = 0.5 mA, f = 30 MHz	1		8	
Small Signal Short Circuit Forward Current Transfer Ratio	h_{FE}	V_{CE} = 5 Volts, I_C = 1 mA, f = 1 kHz	150		450	
Open Circuit Output Capacitance	C_{OBO}	V_{CB} = 5 Volts, I_E = 0 mA, 100 kHZ < f < 1 MHz			6	pF
Noise Figure	NF_1 NF_2 NF_3	V_{CE} = 5 Volts, I_C = 10 µA, R_g = 10 kΩ f = 100 Hz f = 1 kHz f = 10 kHz			5 3 3	dB
Short Circuit Input Impedance	h_{ie}	V_{CB} = 5V, I_C = 1mA, f = 1kHz	2		20	KΩ
Open Circuit Output Admittance	h_{oe}	V_{CB} = 5V, I_C = 1mA, f = 1kHz			60	µmhos
Open Circuit reverse Voltage Transfer Ratio	h_{re}	V_{CB} = 5V, I_C = 1mA, f = 1kHz			$10x10^{-4}$	

SEMICOA Corporation
333 McCormick Avenue, Costa Mesa, California 92626 714.979.1900, FAX 714.557.4541
www.*SEMICOA*.com