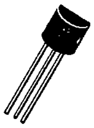
GES5401, GES5551

T-37-17

Silicon Transistors



TO-92

The GE/RCA GES5401 is a PNP and GES5551 is a NPN; they are complimentary silicon transistors designed for use in general-purpose, high amplifier applications. PNP values are negative; observe proper polarity.

These types are supplied in JEDEC TO-92 package.

MAXIMUM RATINGS, *Absolute-Maximum Values:*

	GES5401	GES5551	
COLLECTOR TO EMITTER VOLTAGE (V_{CEO})	−150	160	V
EMITTER TO BASE VOLTAGE (V_{EBO})	−5	5	V
COLLECTOR TO BASE VOLTAGE (V_{CBO})	−160	180	V
CONTINUOUS COLLECTOR CURRENT (I_C)	−600	600	mA
TOTAL POWER DISSIPATION ($T_A \leq 25°C$) (P_T)	350		mW
TOTAL POWER DISSIPATION ($T_C \leq 25°C$) (P_T)	1		W
DERATE FACTOR ($T_A > 25°C$)	2.8		mW/°C
DERATE FACTOR ($T_C > 25°C$)	8		mW/°C
OPERATING TEMPERATURE (T_J)	−55° to +150		°C
STORAGE TEMPERATURE (T_{STG})	−55° to +150		°C
LEAD TEMPERATURE, 1/16" ± 1/32" (1.58mm ± 0.8mm) from case for 10s max (T_L)	−260		°C

ELECTRICAL CHARACTERISTICS, At Ambient Temperature (T_A) = 25°C Unless Otherwise Specified

CHARACTERISTICS	SYMBOL	LIMITS				
		GES5401		GES5551		
		MIN.	MAX	MIN.	MAX	
Collector-Emitter Breakdown Voltage (I_C = 1 mA, I_B = 0)	$V_{(BR)ECO}$	−150	—	160	—	V
Collector-Base Breakdown Voltage (I_C = 100 μA, I_E = 0)	$V_{(BR)CBO}$	−160	—	180	—	
Emiter-Base Breakdown Voltage (I_E = 10μA, I_C = 0)	$V_{(BR)EBO}$	−5	—	5	—	
Collector-Cutoff Current (V_{CB} = −100 V, I_E = O)	I_{CBO}	—	50	—	—	nA
(V_{CB} = 120V, I_E = 0		—	—	—	50	
Emitter Cutoff Current (I_{EB} = 4V, I_C = O)	I_{EBO}	—	50	—	50	
Collector-Emitter Saturation Voltage (I_C = 10 mA, I_B = 1 mA)	V_{CE}(sat)	—	0.2	—	0.15	V
(I_C = 50mA, I_B = 5 mA)		—	0.5	—	0.2	
Base-Emitter Saturation Voltage (I_C = 10 mA, I_B = 1 mA)	V_{BE}(sat)	—	1	—	1	
(I_C = 50mA, I_B = 5 mA)		—	1	—	1	

Signal Transistors

T-37-17

GES5401, GES5551

ELECTRICAL CHARACTERISTICS, At Ambient Temperature (T_A) = 25°C Unless Otherwise Specified (Cont'd)

CHARACTERISTICS	SYMBOL	LIMITS				
		GES5401		GES5551		
		MIN.	MAX	MIN.	MAX	
DC Forward Current Transfer Ratio						
(V_{CE} = 5V, I_C = 1 mA	h_{FE}	50	–	80	–	–
(V_{CE} = 5V, I_C = 10 mA		60	240	80	250	
(V_{CE} = 5V, I_C = 50 mA		50	–	30	–	
Gain-Bandwidth Product (I_C = 20 mA, V_{CE} = 20 V, F = 20 MHZ)	F_T	50	–	50	–	MHZ

TERMINAL CONNECTIONS

Lead 1 - Emitter
Lead 2 - Base
Lead 3 - Collector