T-35-11

Signal Transistors

GES2218A, 19A, GES2218, 19

Silicon Transistors

TO-92

The GE/RCA GES2218, A, 19, A series are planar epitaxial NPN silicon transistors designed for medium speed switches and as amplifiers from audio to VHF frequencies. These types are supplied in JEDEC TO-92 package.

MAXIMUM RATINGS, *Absolute-Maximum Values:*

	GES2218 GES2219	GES2218A GES2219A	
COLLECTOR TO EMITTER VOLTAGE (V_{CEO})	30	40	V
EMITTER TO BASE VOLTAGE (V_{EBO})	5	6	V
COLLECTOR TO BASE VOLTAGE (V_{CBO})	60	75	V
CONTINUOUS COLLECTOR CURRENT (I_C)	800	800	mA
TOTAL POWER DISSIPATION $T_C \leq 25°C$ (P_T)	3	1.8	W
TOTAL POWER DISSIPATION $T_A \leq 25°C$ (P_T)	0.8	0.5	W
DERATE FACTOR, $T_C > 25°C$	20	12	mW/°C
DERATE FACTOR, $T_A > 25°C$	5.33	3.33	mW/°C
OPERATING TEMPERATURE (T_J)	−65° to +200		°C
STORAGE TEMPERATURE (T_{STG})	−65° to +200		°C
LEAD TEMPERATURE 1/16" ± 1/32" (1.58mm ± 0.8mm) from case at 10s max. (T_L)	+260		°C

GES2218A, 19A, GES2218, 19

T-35-11

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

CHARACTERISTICS	SYMBOL	LIMITS				UNITS
		GES2218 GES2219		GES2218A GES2219A		
		MIN.	MAX.	MIN.	MAX	
Collector-Emitter Breakdown Voltage (I_C = 10mA, I_B = 0)	BV_{ECO}	30	—	40	—	V
Collector-Base Breakdown Voltage (I_C = 10μA, I_E = 0)	BV_{CBO}	60	—	75	—	
Emitter-Base Breakdown Voltage (I_E = 10μA, I_C = 0)	BV_{EBO}	5	—	6	—	
Collector Cutoff Curernt (V_{CB} = 50V, I_E = 0)	I_{CBO}	—	0.01	—	—	μA
(V_{CB} = 60V, I_E = 0)		—	—	—	0.01	
Emitter Cutoff Current (V_{EB} = 3V, I_C = 0)	I_{EBO}	—	—	—	10	nA
Collector-Emitter Saturation Voltage (I_C = 150mA, I_B = 15mA)	$V_{BE(SAT)}$	—	0.4	—	0.3	V
(I_C = 500mA, I_B = 50mA)		—	1.6	—	1	
Base-Emitter Saturation Voltage (I_C = 150mA, I_B = 15mA)	$V_{BE(SAT)}$	0.6	2	0.6	1.2	
(I_C = 500mA, I_B = 50mA)		—	2.6	—	2	
		GES2218 GES2218A		GES2219 GES2219A		
DC Forward Current Transfer Ratio (I_C = 0.1mA, V_{CE} = 10V)	h_{FE}	20	—	35		—
(I_C = 1mA, V_{CE} = 10V)		25	—	50	—	
(I_C = 10mA, V_{CE} = 10V)		35	—	75	—	
(I_C = 150mA, V_{CE} = 1V)		20	—	50	—	
(I_C = 500mA, V_{CE} = 10V)		20	—	40	—	
Gain Bandwidth Product (I_C = 20mA, V_{CE} = 20V, f = 100MHz)	f_T	250	—	250*	—	MHz

*f_T for 2219A = 300(min).

TERMINAL CONNECTIONS

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