Signal Transistors T-29-27

MPS-L01, MPS-L51

Silicon Transistors

TO-92

The GE/RCA MPS-L01 NPN type and the MPS-L51 PNP type are planar epitaxial silicon transistors designed for general-purpose, high-voltage amplifier applications. PNP values are negative; observe proper polarity. These types are supplied in JEDEC TO-92 package.

MAXIMUM RATINGS, *Absolute-Maximum Values:*

	MPS-L01	MPS-L51	
COLLECTOR TO EMITTER VOLTAGE (V_{CEO})	120	100	V
EMITTER TO BASE VOLTAGE (V_{EBO})	5	4	V
COLLECTOR TO BASE VOLTAGE (V_{CBO})	140	100	V
CONTINUOUS COLLECTOR CURRENT (I_C)	150	600	mA
TOTAL POWER DISSIPATION $T_C \leq 25°C$ (P_T)	1500	1500	mW
TOTAL POWER DISSIPATION $T_A \leq 25°C$ (P_T)	625	625	mW
DERATE FACTOR, $T_C > 25°C$	12	12	mW/°C
DERATE FACTOR, $T_A > 25°C$	5	5	mW/°C
OPERATING TEMPERATURE (T_J)	−55C to +150		°C
STORAGE TEMPERATURE (T_{STG})	−65C to +150		°C
LEAD TEMPERATURE 1/16" ± 1/32" (1.58mm ± 0.8mm) from case at 10s max. (T_L)	+260		°C

File Number **2071**

MPS-L01, MPS-L51

T-29-27

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

CHARACTERISTICS	SYMBOL	LIMITS				UNITS
		MPS-L01		MPS-L51		
		MIN.	MAX.	MIN.	MAX	
Collector-Emitter Breakdown Voltage (I_C = 1mA, I_B = 0)*	BV_{CEO}	120	–	100	–	V
Collector-Base Breakdown Voltage (I_C = 100μA, I_E = 0)	BV_{CBO}	140	–	100	–	
Emitter-Base Breakdown Voltage (I_E = 10μA, I_C = 0)	BV_{EBO}	5	–	4	–	
DC Forward Current Transfer Ratio (I_C = 50mA, V_{CE} = 5V)	h_{FE}	–	–	40	250	–
(I_C = 10mA, V_{CE} = 5V)		50	300	–	–	
Collector Saturation Voltage (I_C = 10mA, I_B = 1mA)	$V_{CE(SAT)}$	–	0.2	–	0.25	V
(I_C = 50mA, I_B = 5mA)		–	0.3	–	0.3	
Base-Emitter Saturation Voltage (I_C = 10mA, I_B = 1mA)	$V_{BE(SAT)}$	–	1.2	–	1.2	
(I_C = 50mA, I_B = 5mA)		–	1.4	–	1.2	
Gain-Bandwidth Product (I_C = 10mA, V_{CE} = 10V, f = 100MHz)	f_T	60	–	60	–	MHz
Output Capacitance (V_{CB} = 10V, I_E = 0, f = 1 MHz)	C_{ob}	–	8	–	8	pF

*Pulse condition: 300μs pulse width, 2% duty cycle.

TERMINAL CONNECTIONS

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