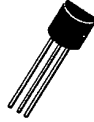


Signal Transistors

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_{CE0})	120	100	V
EMITTER TO BASE VOLTAGE (V_{EB0})	5	4	V
COLLECTOR TO BASE VOLTAGE (V_{CB0})	140	100	V
CONTINUOUS COLLECTOR CURRENT (I_C)	150	600	mA
TOTAL POWER DISSIPATION $T_C \leq 25^\circ\text{C}$ (P_T)	1500	1500	mW
TOTAL POWER DISSIPATION $T_A \leq 25^\circ\text{C}$ (P_T)	625	625	mW
DERATE FACTOR, $T_C > 25^\circ\text{C}$	12	12	mW/ $^\circ\text{C}$
DERATE FACTOR, $T_A > 25^\circ\text{C}$	5	5	mW/ $^\circ\text{C}$
OPERATING TEMPERATURE (T_J)	-55C to +150		$^\circ\text{C}$
STORAGE TEMPERATURE (T_{STG})	-65C to +150		$^\circ\text{C}$
LEAD TEMPERATURE $1/16" \pm 1/32"$ (1.58mm \pm 0.8mm) from case at 10s max. (T_L)	+260		$^\circ\text{C}$

File Number 2071

Signal Transistors

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