MPS6531, MPS6532, MPS6534

Silicon Transistors

TO-92

The GE/RCA MPS 6531, MPS6532 are NPN and MPS6534 is a PNP planar epitaxial passivated silicon transistors designed for general purpose switching and amplifier applications. PNP values are negative; observe proper polarity. These types are supplied in JEDEC TO-92 package.

MAXIMUM RATINGS, *Absolute-Maximum Values:*

	MPS6531	MPS6532	MPS6534	UNITS
COLLECTOR TO EMITTER VOLTAGE (V_{CEO})	40	30	40	V
EMITTER TO BASE VOLTAGE (V_{EBO})	5	5	4	V
COLLECTOR TO BASE VOLTAGE (V_{CBO})	60	50	40	V
CONTINUOUS COLLECTOR CURRENT (I_C)	600	600	600	mA
TOTAL POWER DISSIPATION $T_A \leq 25°C$ (P_T)	350	350	350	mW
TOTAL POWER DISSIPATION $T_C \leq 25°C$ (P_T)	1	1	1	W
DERATE FACTOR, $T_A > 25°C$	2.8	2.8	2.8	mW/°C
DERATE FACTOR, $T_C > 25°C$	8	8	8	mW/°C
OPERATING TEMPERATURE (T_J)		−55 to +150		°C
STORAGE TEMPERATURE (T_{STG})		−65 to +150		°C
LEAD TEMPERATURE 1/16" ± 1/32" (1.58mm ± 0.8mm) from case at 10s max. (T_L)		+260		°C

File Number **2079**

MPS6531, MPS6532, MPS6534

T-29-17

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

CHARACTERISTICS	SYMBOL	LIMITS						UNITS
		MPS6531		MPS6532		MPS6534		
		MIN.	MAX.	MIN.	MAX	MIN.	MAX.	
Collector-Emitter Breakdown Voltage (I_C = 10mA, I_B = 0)	$V_{(BR)ECO}$	40	–	–	–	–40	–	V
(I_C = 10mA, V_{BE} = 0)		–	–	30	–	–	–	
Collector-Base Breakdown Voltage (I_C = 10μA, I_E = 0)	$V_{(BR)CBO}$	60	–	50	–	–40	–	
Emitter-Base Breakdown Voltage (I_E = 10μA, I_C = 0)	$V_{(BR)EBO}$	5	–	5	–	–4	–	
Collector-Cutoff Current (V_{CB} = 30V, I_E = 0)(V_{CB} = 40V for 6531)	I_{CBO}	–	50	–	–	–	–50	nA
(V_{CB} = 20V, I_E = 0)(V_{CB} = 30V for 6532)		–	–	–	100	–	–	
(V_{CB} = 30V, I_E = 0, T_C = 60°C)(V_{CB} = 40V for 6531)		–	2	–	–	–	–2	μA
(V_{CB} = 20V, I_E = 0, T_A = 60°C)(V_{CB} = 30V for 6532)		–	–	–	5	–	–	
Emitter-Base Reverse Current (V_{EB} = 4V, I_C = 0)	I_{EBO}	–	100	–	100	–	–	nA
(V_{EB} = 3V, I_C = 0)		–	–	–	–	–	–100	
DC Forward Current Transfer Ratio (V_{CE} = 1.0V, I_C = 10mA)	h_{FE}	60	–	–	–	60	–	–
(V_{CE} = 1.0V, I_C = 100mA)*		90	270	30	–	90	270	
(V_{CE} = 10V, I_C = 500mA)*		25	–	–	–	25	–	
Collector-Emitter Saturation Voltage (I_C = 100mA, I_B = 10mA)*	$V_{CE(SAT)}$	–	0.3	–	0.5	–	–1.2	V
Base-Emitter Saturation Voltage (I_C = 100mA, I_B = 10mA)*	$V_{BE(SAT)}$	–	1.2	–	1	–	–1.2	
Collector-Base Capacitance Voltage (V_{CE} = 10V, I_E = 0, f = 1MHz)	C_{cb}	–	5	–	5	–	6	pF

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

TERMINAL CONNECTIONS

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