2N 5368 through 2N 5375

COMPLEMENTARY SILICON GENERAL PURPOSE AMPLIFIERS AND SWITCHES

MICRO ELECTRONICS

THE ABOVE TYPES ARE SILICON PLANAR EPITAXIAL TRANSISTORS FOR GENERAL PURPOSE AMPLIFIERS AND MEDIUM SPEED SWITCHING APPLICATIONS.

CASE TO-92F

ABSOLUTE MAXIMUM RATINGS		2N5368(NPN) 2N5369(NPN) 2N5370(NPN)	2N5372(PNP) 2N5373(PNP) 2N5374(PNP)	2N5371(NPN) 2N5375(PNP)
Collector-Base Voltage	V_{CBO}	60V	60V	40V
Collector-Emitter Voltage	V_{CEO}	30V	30V	30V
Emitter-Base Voltage	V_{EBO}	5V	5V	5V
Collector Current	I_C	500mA	500mA	500mA
Total Power Dissipation ($T_A \leq 25^oC$)	P_{tot}		500mW ** derate 4mW/°C above 25°C	
Operating Junction & Storage Temperature	T_j, Tstg		-55 to 150°C	

** 360mW in JEDEC registration.

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	BV_{CBO}	↑			V	I_C=0.01mA I_E=0
Collector-Emitter Breakdown Voltage	LV_{CEO} *	Note 1			V	I_C=10mA I_B=0
Emitter-Base Breakdown Voltage	BV_{EBO}	↓			V	I_E=0.01mA I_C=0
Collector Cutoff Current	I_{CBO}					
2N5368,69,70				50	nA	V_{CB}=40V I_E=0
2N5372,73,74				50	nA	V_{CB}=40V I_E=0
2N5371,75				50	nA	V_{CB}=30V I_E=0
Emitter Cutoff Current	I_{EBO}			50	nA	V_{EB}=3V I_C=0
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$*		0.18	0.3	V	I_C=150mA I_B=15mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$*		0.84	1.3	V	I_C=150mA I_B=15mA
Base-Emitter Voltage	V_{BE} *		0.8	1.2	V	I_C=150mA V_{CE}=10V
Current Gain-Bandwidth Product	f_T					
2N5368 thru' 2N5371		250	370		MHz	I_C=20mA V_{CE}=10V
2N5372 thru' 2N5375		150	270		MHz	I_C=20mA V_{CE}=10V
Collector-Base Capacitance	Ccb					
2N5368 thru' 2N5371				8	pF	V_{CB}=10V I_E=0
2N5372 thru' 2N5375				10	pF	f=1MHz

For p-n-p devices, voltage and current values are negative.

Note 1 : Equal to the values of absolute maximum ratings.

* Pulse Test : Pulse Width=0.3mS, Duty Cycle=1%

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